EFFECTS OF TRAINING ON KNOWLEDGE AND QUALITY OF REPRODUCTIVE HEALTH COMMUNICATION BETWEEN PARENTS AND THEIR ADOLESCENTS IN TWO COMMUNITIES IN IBADAN, NIGERIA

BY

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
(HEALTH PROMOTION AND EDUCATION)

IN THE DEPARTMENT OF HEALTH PROMOTION AND EDUCATION, FACULTY OF PUBLIC HEALTH
COLLEGE OF MEDICINE
UNIVERSITY OF IBADAN, NIGERIA

March, 2016

Dedication

This work is dedicated to the Glory of Almighty Allah, the omnipotent and omniscience who created, protected and provided me with wisdom to start and complete the thesis. You are the Alpha and Omega. It is You I will worship and unto You I will return.

ABSTRACT

Adolescent Reproductive Health (ARH) problems are emerging public health concerns in Nigeria; yet they can be tackled through Parent-Adolescent intervention. However, paucity of information exists on knowledge and quality of parent-adolescent communication. This study was, therefore, designed to evaluate the effects of training on knowledge and quality relating to ARH communication between parents and their adolescents in Ibadan, Nigeria.

A quasi-experimental study was conducted in Egbeda and Ido Local Government Areas, which were randomly selected and allocated into Experimental Group (EG) and Control Group (CG), respectively. A three-stage random sampling technique was used to select 109 Parent-Adolescent Pairs (PAP) from compounds, houses and households in EG and 106 PAP from CG. Interviewer-administered instruments were used to collect data from the parents and adolescents at baseline. Both instruments included a 30-point knowledge scale and questions on ARH practices. The instrument for adolescents contained an additional 15-point Perceived Quality of ARH Communication (PQARHC) scale. Knowledge scores ≤10, >10-20 and >20 were categorised as poor, fair and good, respectively for both parents and adolescents. The PQARHC scores ≤5, >5-10 and >10 were categorised as poor, fair and good, respectively. Baseline results were used to design a training intervention for parents. The intervention enhanced the capacity of parents in EG to discuss ARH issues with their adolescents. Parents in CG were provided leaflet on personal hygiene. A post-intervention survey was conducted among the two groups. Data were analysed using descriptive statistics, Chi-square and Students' t-tests at p=0.05.

Ages of adolescents were 13.9±2.4 (EG), 13.9±2.3 (CG) years while parents' ages were 43.6±9.5 and 42.6±8.5 years, respectively. Parents knowledge scores at baseline were 21.5±3.4 and 21.3±3.3 for EG and CG, respectively with no significant difference. Knowledge of EG and CG at post-intervention were 27.0±1.9 and 23.1±3.0, respectively with a significant difference. At baseline, adolescents in EG and CG whose parents ever discussed ARH issues with them were 20.2% and 21.7%, respectively. At post-intervention, all the adolescents in EG (100.0%) and 4.7% in the control reportedly received ARH information from their parents. Adolescents' knowledge increased from 14.7±5.5 at baseline, to 22.9±1.6, significantly, at post-intervention in EG; no such difference was noted among CG. Parents in EG and CG with good knowledge were 84.4 and 84.0%, respectively with no significant

difference at baseline. Significantly, more parents in EG (100.0%) than control (90.7%) had good knowledge at post-intervention. Adolescent respondents with good knowledge in EG increase significantly from 8.3% to 92.9% at post-intervention. The proportion with good knowledge at the baseline and post-intervention among CG were 6.6% and 22.1% with significant difference. Adolescent in EG whose PQARHC with their parents was adjudged to be of good quality were 17.4% and 100.0%, respectively with significantly difference at post-intervention. Among CG, the values at baseline and post-intervention were 20.8% and 4.7%, respectively with significant difference.

Training was effective in improving knowledge and quality of communication among parents and their adolescents in Egbeda Local Government Area. Policy intervention and social-marketing strategies are recommended for institutionalising and scaling up the intervention.

Keywords: Adolescent reproductive health, Parent-adolescent communication, Quality of Reproductive health communication

Word count: 498

ACKNOWLEDGEMENTS

Many people have contributed to the design and completion of this thesis and my sincere gratitude goes to them all. I would like to thank some persons mentioned in a special way. I am very grateful to the study participants for their time and contributions to the success of the study. Thank you for the interest and cooperation I enjoyed during the course of the research work.

My supervisor: Prof. Ademola J. Ajuwon, thank you for your insightful suggestions, guidance and critical reviews at various stages. I hereby acknowledge all the support he gave me throughout my doctoral studies. Your time and useful suggestions in making the final preparations of this thesis is highly appreciated.

I am indebted to my Head of Department: Prof. Oladimeji Oladepo, for all the support he gave me throughout my doctoral studies. His great advice during design and implementation of the research is highly appreciated; he was indeed a pillar of support.

My mentor: Prof. Adeniyi J.D. (Our father), thank you for being a pillar of support. Thank you for the advice you have given me. I am very grateful sir. You are a pillar of excellence. You have been a great source of inspiration to me.

Prof. William R. Brieger, my external mentor at Johns Hopkins University, Baltimore, USA, thank you for the support that you gave right from the conception of this project to its completion. You attracted me to the field of public health and I am grateful for showing me the light. Your great words of wisdom, encouragement and financial support contributed immensely to the successful completion of this thesis.

To my lecturers and senior colleagues in the Department: Drs O.S. Arulogun, Oshiname, F.O. and Oyewole O.E. Thank you for all the advice and support you gave during the various stages of this research work. I am grateful for the resources you share with me and for creating time to review the thesis on several occasions.

I thank Dr Eme Owoaje, the Director of Research Management Office; Dr Ana G.R.E.E -Ag Head of Department Environmental Health Sciences and Dr Folake Samuel of Department of

Human Nutrition for their concern about my professional/academic development and words of encouragement. I also appreciate the supports of the following: Dr F. Adebowale, Mr I.O. Dipeolu, Mrs Adeyimika T. Desmennu, Mrs. Moji Oluwasanu, Dr. Uchendu, Dr. Adebayo, Mr. Adejumo Mumuni- for processing the data, Mr. Taiwo Hammed, Mr. Afolabi Nathaniel and Dr. Akpa. Thanks you for all the assistance rendered at one stage or the other.

I am very grateful to the Ibadan Academic Development (IAD) for funding part of my doctoral research work. I really appreciated Prof. Amy Lukes and Prof. Tayo of the University of Chicago whose intervention enabled me to get the financial support. I also thank Department of Health Promotion and Education under the headship of Prof. O. Oladepo, which also provided funding for the part of my follow-up data collection and analysis.

I extend my appreciation to the following at the University of Ibadan for different roles played during the intervention stage: Dr. Ayo Ojebode of Department of Language and Communication Arts, Mrs. A. Makinde of Fertility Unit, Department of Obstetrics and Gynecology and Mrs. Olukemi Ayodele of Department of Medicine. Thank you for the different support and roles played by you during the intervention phase of this research.

I am grateful to Mr. Sunday Edunjobi and Mr. Oluwole Dumula, who assisted in the supervision of data collection and the 10-man team that did data collection during the baseline and follow-up. I also appreciate the moral and financial support received from my friends during the data collection. You are all appreciated.

I am indebted to the administrative staff of the Department of Health Promotion and Education being headed by Mr. Olubodun (A.K.A Egbayi). Thank you all for the help at different stages of my PhD programme.

My family: My father and mother, you are true heros and a great inspiration. Thank you for the training you gave me. I will always appreciate you. My brothers- Mr. Titiloye J.O., Pastor Adesola B. and Mr. Titiloye Oseni, thank you all for your encouragements and financial support. My sisters: Mrs Adedeji M., Mrs Michael S., Mrs. Adewuyi K., Mrs. Adegbola B. Thank you for the words of encouragement that keep my focused during the course of the study.

Last but not least: My wife- Mrs. Nasimot Nihinlolawa Titiloye, you are truly “the rock”. Thank you for all your support, FOR taking care of me and our children, especially during the data collection and intervention phase of the study. My children: Farhan Oyewuwo, Faozziyat Oyefunke, Faruq Adegboyega and Farianat Oyedunni. Thank you dears for bearing with me. Your love and understanding made a whole lot of difference to my struggles.

TITILOYE Musibau Ayoade

CERTIFICATION

I certify that this study was carried out by Mr. Musibau Ayoade Titiloye in the Department of Health Promotion and Education, Faculty of Public Health, College of Medicine, University of Ibadan, Nigeria under my supervision.

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ASRH	Adolescent Sexuality and Reproductive Health
FGD	Focus Group Discussion
FMOH	Federal Ministry of Health
HIV	Human Immunodeficiency Virus
LGA	Local Government Area
MIS	Management Information System
NARHS	National HIV/AIDS and Reproductive Health Survey
NDHS	National Demographic and Health Survey
PCC	Parent Child Communication
STI	Sexually Transmitted Infections
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP HDR	United Nations Development Programme, Human Development Report
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Emergency Fund
USAID	United States of America International Development
WHO	World Health Organization
YFC	Youth Friendly Centres

OPERATIONAL DEFINITION OF TERMS

Parents: A mother or father who has at least a child –male or female, aged 10-19 years in the study area.

Adolescent: A person male or female within the ages of 10-19 years and is either in or out-of-school in the study area.

Adolescence: A period of transition from childhood to adulthood within the age bracket 10-19 years.

Adolescent Reproductive Health issues: According to this study, Adolescent Reproductive Health is limited to pregnancy prevention, abortion prevention, Sexually Transmitted Infection including HIV/AIDS and physiological development.

Sexuality Education: Sexuality education is a process of providing information, skills and services that enable persons adopt safe sexual behaviours including abstinence, non-penetrative sex such as hugging, holding hands, as well as correct and consistent use of condoms.

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background to the Study

According to the World Health Organisation (WHO) (1989), an adolescent is someone aged between 10 and 19 years. The period of adolescence has been regarded as a stressful time in which the adolescent group has its own sub-culture that differs from other developmental periods. This period is characterised by plenty of energy and drive, a desire for change, newness and a high sense of idealism, which when coupled with lack of experience and wisdom result in mistakes and frustrations (Asuzu, 1991; Salawu, 2007). Adolescence is also a period of tremendous opportunity as well as of risks. It is a period which is characterised by physical, psychological and social change (Nanada, 2003; Salawu, 2007).

During this period, the individual is in the process of achieving, through learning and testing himself (or herself) and society, the attitudes, beliefs and skills needed to be an adult, and hopefully, an effective participant in society (Action Health Incorporated, AHI, 2002). It is a common practice to shield young people from receiving education about sexuality because of the belief that access to such information will encourage them to become sexually active (Salawu, 2007). Unfortunately, wherever people try to provide youths with sexuality education result in heated debates (AHI, 2006; Salawu, 2007). This is understandable to the extent that nobody wants his or her child to become involved in frivolous discussions about sexuality or early sexual relations (Salawu, 2007). However, the 1993 World Health Organization (WHO, 1993) study on the effects of education on people's sexuality behaviour showed overwhelmingly that there is no evidence to support the contention that sexuality education in schools leads to early or increased sexual activity among young people (Sexuality Information and Education Council for United State, SIECUS, 2001).

Empirical evidences have shown that sexuality is a central aspect of being human throughout life and encompasses sex, gender identities and roles, sexual orientation, eroticism, pleasure, intimacy and reproduction (WHO, 2002; Ferguson, 2010). Adolescents require information and skills to assist them to learn about sexuality, to explore their attitudes and values, and to practise the decision-making and other life skills they need to make informed choices about their sexual lives and protect their health. Good international technical guidance and country

examples exist on which to inspire expanded and improved efforts on sexuality education (WHO, 2002; Ferguson, 2010).

Sexuality is often broadly defined as the social construction of a biological drive (WHO, 2002) which often deals with issues such as whom one has sex with, in what ways, why, under what circumstances and with what outcomes a person engages in sex (National Aids Control Council (NACC), 2002; Ajuwon, 2005). Thus, sexuality pertains to the totality of being human - being a female or male - and this suggests a multidimensional perspective of the concept of sexuality which is shaped by biological, psychological, economic, political, social, cultural and religious factors operating within a particular culture in each society (Ajuwon, 2005).

According to Ajuwon (2005), sexuality education is a process of learning about how an individual can be comfortable about all aspects of being human. Sexuality education can also be described as a process of providing information, skills and services that enable persons to adopt safe sexual behaviours including abstinence, non-penetrative sex such as hugging, holding hands, as well as correct and consistent use of condoms. Sexually healthy behaviours also include seeking care from trained health workers during incidence of any reproductive morbidity such as sexually transmitted infections (STIs), unwanted pregnancy, and infertility.

Although people of all age groups can benefit from sexuality education, targeting young persons with sexuality education seems much more important due to the fact that adolescents reach sexual maturity before they develop mental/emotional maturity and the social skills needed to appreciate the consequences of their sexual activity (Fee and Youssef, 1993; Ajuwon, 2005). It was also revealed that girls of nowadays enter puberty as young as age of eight (8) and reach menarche (first menstruation) earlier than the previous generations did; this is believed to be due to improved health status and nutrition (Ajuwon, 2005).

1.2 Statement of Problem

According to Barneth (1997) teenagers that live in stable family environments, and are close to their parents, are more likely to remain sexually abstinent, postpone intercourse, have fewer partners, and use contraception. In almost all societies, educating children about sex is not a task that parents and other family members find easy. Many feel uncomfortable talking with their children about the subject for cultural and traditional beliefs.

In Africa, communication about sexual and reproductive health issues (e.g., relationships, menstruation, and maternity care) generally is considered the responsibility of mothers (Wamoyi, Fenwick, Urassa, Zaba and Stones; 2010). Parent-child communication about sexuality was common in families and mainly on same sex basis. It typically consisted of warnings, threats and physical discipline and was triggered by seeing or hearing something a parent perceived as a negative experience (such as a death attributable to HIV and unmarried young person's pregnancy) (Wamoyi *et al*., 2010).

According to Kiragu, Obwaka, Odallo and Hulzen (1996), in many traditional settings in Africa, particularly in Nigeria, parents are not expected to educate their adolescent children on sexuality. These days however, parents tend to be divided on the issue of sexuality-education communication with their children based on gender. Fathers find it easier to communicate with the son on such issues while mothers communicate better with the daughter (Olarinde, 2006).

Lagina (2002) reported that in the African tradition, parents play a significant role in molding the characters and behaviour of their children. When parents affirm the value of their children, young people more often develop positive and healthy attitudes about themselves. Norms, values and beliefs are passed from one generation to another. In some cultures, parents and family members such as aunts, uncles, elder sisters and grandparents are influential sources of knowledge, beliefs, attitudes and values for children and youth. They are role models who shape young people's perceptions of gender roles. Parents and family members also influence the choices that youths make about their sexual behaviours. Parents and other family members often have the power to guide children's development and behaviour toward healthy sexuality as a natural, normal and progressive experience within the life cycle. They can help their children develop and practise responsible sexual behaviour and personal decision-making (Lagina, 2002).

However, there are worries about how much information to give children and at what age, based on the belief that the provision of sex-related information will prompt them to experiment with sex. Many adults did not receive sexuality education themselves as they were growing up, and some have fears arising from their own negative sexual experiences (UNFPA, 1993). Adult family members, therefore, tend to shy away from actively educating the youths about issues relating to sexuality. What many fail to realize is that giving no

information or evading young people's questions relating to sexuality can send negative messages (UNFPA, 1993).

Most attempts by some parents to impart sexuality education on the young ones tend to use a "top-down" communication style that denies adolescents the opportunity to express themselves and make decisions about their reproductive health (Yowell, 1997). For example, the result of a study conducted among adolescent mothers in Ibarapa district of Oyo State Nigeria, showed that none had ever communicated with their mothers on human sexuality while they were teenagers (Oladapo and Brieger, 1997).

When young people do not get the needed sexuality information at home, they look elsewhere -to peers, the media or their observations of other adults for answers. This can lead to misinformation and the persistence of myths, thus making young people vulnerable to participating in risky sexual activities including early sexual debut leading to unwanted and sex-related experiences such as unplanned pregnancy, sexually transmitted infections, and severe psychopathologies including low self-esteem (Fasula and Miller (2006).

In cultures where young people report desiring information from adult family members about sex and reproduction, educating parents and other family members can help adults feel more confident in addressing the reproductive health questions and concerns of youths (Fasula and Miller, 2006). According to Fasula and Miller (2006), adolescent sexual experiences are dynamic, varied and embedded in a complex social context in which adolescents are confronted with a multitude of conflicting messages. Within this barrage of sexual messages, parents can make their voices stand out by opening up a dialogue with their children so that their children feel safe to ask question and learn about sexuality.

In many parts of the world the sexual and reproductive health needs of adolescents are either poorly understood or not fully appreciated. Evidence is growing that this neglect can seriously jeopardize the health and future well-being of young people (WHO, 2014). In Africa, discussion on sex-related matters is still considered a taboo. It is even worse if it involves inter-generational communication (Focus on Young Adults, 2001). Perhaps this is one of the reasons studies on parent-children communication on sexual matters are rare in sub-Saharan Africa. Most of the studies that investigated different ways young people get knowledge on sex-related matters usually focus on school-based family life education (Adegbenro, 2008),

peer education (Osowole, 1998; Ajuwon, 2000 and Adegbenro, 2008) and media (AHI, 2002 and SIECUS, 2001) to mention a few. Yet, young people spend a lot of their time at home with their parents, creating opportunities for discussion on sexuality and other matters pertaining to their lives. In most cases parents become role models who shape young people's lifestyles including their sexual behaviour. However, parents are reluctant to talk with their adolescent children about reproductive health matters because of lack of knowledge, or the concern that the discussion will influence adolescents to engage in sexual activity (Focus on Young Adult, 2001). Hence, there is need to implement interventions that empower parents to communicate with their adolescents.

1.3 Justification of the Study

This study is justified for three reasons. One, according to Ajuwon (2013) adolescents are a significant component of global, as well as Nigeria, population by virtue of their size. One-third (46.6 million) of Nigeria's total population of 140 million are young person between the ages of 10 and 24 (UNFPA, 2010; Ajuwon, 2013; PRB, 2013). So addressing the Adolescent Reproductive Health (ARH) education of this population is an appropriate investment. Educating adolescents today is an investment for the future since these adolescents will be parents of tomorrow.

Two, there are sufficient evidence that lack of sexual health information and services places young people at risk of pregnancy, abortion, Sexually Transmitted Infections (STIs) and HIV/AIDS. According to Amoran and Fawole (2008), the prevalence of HIV/AIDS is highest among the 10-19 years age group in Nigeria. According to Ogunjuyigbe and Adepoju (2014) major adolescent reproductive health problems in Nigeria include teenage pregnancy; sexually transmitted infections (STIs); illegal abortion which constitute the major cause of deaths among adolescents; high and early entry of adolescents into sexual activity, and lack of adequate information about safe sex (Ogunjuyigbe and Adepoju, 2014; Adeokun, Ricketts, Ajuwon and Ladipo, 2009; UNFPA, 2006).

Africa accounted about four-fifth of the estimated five million young people living with HIV (UNAID, 2011), and unsafe abortion due to unwanted pregnancy have been inflicting about one fourth of the four million unsafe abortion among the adolescents (WHO, 2011). The common reason for acquiring these health problems is lack of basic knowledge on reproductive biology and prevention methods. The prevailing potential sources of SRH

information for the young people are their peers whom their knowledge are infirmed/equally ignorant or from school which is blamed for the lack of sustainable behavioural changes or from media and religious institutions that occur infrequently (Jewkes, 2010).

This underscores the importance of implementing prevention programme long before sexual activity begins, as many young people are unaware of the threat posed by HIV (UNAIDS, UNFPA and WHO, 2004). Early parental guidance and communication on HIV and AIDS starting from the home serves as a strong tool for HIV and AIDS prevention among adolescents (UNAIDS *et al*. 2004; FMOH and WHO, 2007).

According to Casey (2001), Nigeria's adolescent fertility rate was 111 births per 1,000 among women aged 15 to 19, and Nigerian women averaged more than five births during their lifetime. Teenage mothers were more likely than older women to suffer from serious complications during delivery, resulting in higher morbidity and mortality for both mothers and infants (Casey, 2001).

Thirdly, the study is significant because bulk of previous studies on ARH in Nigeria were exploratory, documenting the reproductive health needs, concerns and problems of this sector. Most of the studies were also conducted either in rural or urban communities leaving out those in peri-urban dwellers. Few of such studies actually led to interventions through parents. Thus the study design is unique in these regards.

This study will also provide empirical support for the theoretical framework applied in designing the intervention. Theoretical construct was used to design all aspect of the study including the design of training curriculum and training intervention. The outcome of this study would provide rational basis for modifying existing health education activities designed for adolescents at community level and providing evidence for policy reform on adolescent reproductive health. The study will also enhance the health education profession by documenting the outcomes so that other professionals can use it to enhance parent-adolescent reproductive health.

Few studies exist on ways parents can be educated to facilitate parent-adolescent communication on Reproductive Health (RH) in Nigeria. The quasi-experimental study presented in this thesis was conducted to address this problem. This study therefore focused

on the effects of educational interventions on knowledge and quality of reproductive health communication between parents and their adolescent children in two communities in Ibadan, Nigeria.

1.4 Research Questions

The seven research questions that guided the study are stated below:

1. What is the level of knowledge of adolescents and their parents on ARH in the study area?
2. What is the pattern of communication on ARH issues between parents and their adolescent in the study area?
3. What is the quality of adolescent reproductive health communication between parents and their adolescent children in the study area?
4. What factors affect parent-adolescent communication on adolescent reproductive health in the study area?
5. What parent-adolescent ARH intervention would be suitable to address the findings from questions 1-5?
6. How effective is a tailored educational intervention on the parent-adolescent communication in the selected communities Ibadan?

1.5 Objectives of the Study

1.5.1 Broad objective

The broad objective of this study was to investigate the effects of training on knowledge and quality of reproductive health communication between parents and their adolescents in two communities in Ibadan, Nigeria.

1.5.2 Specific objectives

To provide answer to these research questions, the following specific objectives were formulated for the study:

1. Determine the baseline knowledge of adolescents and their parents; on ARH issues including pattern and quality of communication between parents and their adolescent children and factors influencing parent-adolescent communication on ARH issues.
2. To design and implement a training intervention in promoting quality parent-child communication on adolescent reproductive health; and

3. Evaluate the effects of the training intervention on knowledge, frequency and quality of adolescent reproductive health communication.

1.6 Research Hypotheses

As a result of the intervention and outcome variables involved, the study hypothesizes that there will be significant different between experimental and control groups before and after the intervention in respect to:

1. Parents and adolescents knowledge of ARH issues
2. Quality of parent-adolescent communication and
3. Adolescents sexual practices

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Adolescence and Sexuality Education

The World Health Organization (WHO, 2003) defines adolescents as the age group 10–19, which is considered a time of transition from childhood to adulthood, during which young people experience changes and responsibilities of adulthood. As a group, however, adolescents have sexual and reproductive health needs that differ from those of adults in important ways and which remains poorly understood or served in much of the world (Bott and Jejeebhoy, 2000).

Adolescence is a period of risk, often marked by health problems as too early and unwanted pregnancies and such behaviour have serious immediate or longer term consequences. Alongside this, there are enormous changes in the person's social interaction and relationships (Chandra, 2003). Adolescence as a physiological state is a universal experience. This stage also marks the beginning of intense involvement in peer sub-culture, conformity with the ideals of this group and sexual experimentation (Salawu, 2007).

Globally, there is an increase in the demand for greater involvement of parents in adolescent sexuality education (DiClemente, Wingood, Crosby, Cobb, Harrington and Davies, 2001 and UNAIDS, 2010). Many factors have been identified as barriers to parent-child adolescent sexuality conversation, among which are parental lack of capacity, ignorance, feeling of embarrassment, gender, parents' perception of adolescent sexuality, their lack of knowledge of when and how to initiate sexuality discussions and the fear of encouraging sexual activity prematurely (DiClemente et al, 2001 and WHO, 2011). Since parents are the initial foundation of character formation and primary agents of socialization, their role in adolescent development cannot be overemphasized. Parents, particularly mothers, influence sexual attitudes, beliefs, and behaviours of their adolescent children and they do this in a variety of ways, including modelling, maintaining a warm and close relationship that facilitates open communication, monitoring adolescent activities, and encouraging religious beliefs and practices that influence morality and sexual behaviour (DiClemente et al, 2001)

Communication about sexuality between parents or caregivers and offspring has also been identified as a protective factor for a range of sexual behaviours, including a delayed sexual debut, particular for females (Markham, Lormand, Gloppen, Peskin, Flores, Low and House, 2010). Parent-child discussions about sexuality are not common in rural Nigeria where it remains taboo to do so. Parents tend to portray sexuality as 'dangerous, unpleasant, and unsavoury' in discussions with their children and tended to use threats and indirect speech in discussions. Parents worried that discussions would encourage early sexual experimentation (Izugbara, 2008).

Improving the sexual and reproductive health of young people is a global priority. The role of parents in the sexual and reproductive health of adolescents in sub-Saharan Africa has been studied as part of broader efforts to understand sexual socialization and sexual agency (Bastien, Kajula, and Muhwezi, 2011). In most cases adolescents expect their parents to be the primary source of information on sex and sexuality. More often than not, parents fail in their responsibility of timely transfer of appropriate sexuality information to their children (Richter, 2006 and Paul-Ebhohimhen, Poobalan and Teijlingen, 2008).

Study conducted in suburban Ibadan, Nigeria found that low levels of communication were related to parental perceptions of their child's readiness or maturity, the assumption that their child would have heard about these issues elsewhere, that discussions of contraception for instance should be restricted to married people, and the often cited concern that such discussions may 'corrupt' young people or encourage early experimentation (Adeyemo and Brieger, 1994).

Communication is an important, legitimate activity of family life and sex education programmes. Information enables the target group to make informed choices related to sexual practices, but it does not necessary motivate them to act (Iyaniwura, 2006). Communicating the sexuality education message to Nigeria adolescents remains challenging task (AHI, 2002). Communication can play a powerful role in sexual health development by helping to diffuse knowledge in respect of the goals of development and preparing people for the roles expected of them (Parks, 2002). The goal of sexuality information communicated is to promote reproductive health and enable teenage to understand why they need to choose a good source of sexuality information communicated and act responsibly in matters of sex (SIECUS, 2001).

Most sexually active adolescents living with their parents usually do not want their parents to know of their sexual activities. This is worse where parents do not communicate on sexual issues with children or where the adolescent cannot discuss such issues with parents. Some mothers opined that adolescents of ages 10 to 13 are too young to have sexual knowledge or be involved in sexual activities. However, it has been noted that boys and girls experience puberty at younger ages compared to previous generations (Akin-Otiko 1998), many of them reach sexual maturity before they attain emotional or social maturity.

Clear parent-child communication on values and behaviour about sex is an important step in helping adolescent delay sexual initiation and make responsible decisions about sexual behaviours later in life. Parents have unique opportunities to discuss HIV/Aids, STD and teenage pregnancy prevention with adolescent on regular and timely bases (Dittus, Miller, Kotchick, and Forehand, 2004). Adolescents often cite their parents as their preferred source of education about sex (Alexander 1984); however, many studies have shown that parents find it difficult to talk with their children about menstruation, contraception and pregnancy (Liskin 1985). Generally, mothers have been found to discuss sexuality with adolescents more than fathers, this parental gender difference is often affected by gender of the adolescent (Miller, Kotchick, Dorsy, Forehand and Ham 1998).

Lagina (2002) noted that older people expects the youth to know about abstinence, contraceptives, and other means of preventing HIV/Aids infection. The media however, has been noted to be a main source of information to adolescents about sex. In Nigeria, the most common sources of information on sexuality among secondary school students were the television, radio, health workers and newspaper in that order, parents ranked fifth (Oladepo and Brieger 1997). Studies also revealed that adolescents were more comfortable discussing sexually related issues with older sisters, brothers, mothers, and fathers in that order. About 30.3% of 2145 adolescents felt comfortable discussing with older sisters, 21.4% with older brothers, and 19.8% with mothers while only 8.7% felt all right discussing HIV/Aids and related issues with fathers. The study revealed that many parents and adolescents alike find it difficult discussing sexual matters; parents did not communicate much on sex with adolescents though more information was given to daughters than sons (NARHS 2003).

Studies showed that adolescent girls find it easier to discuss sex and reproductive health with their mothers (Griffin-Carlson and Schwanenflugel, 1998). Many girls in Pakistan also reported their mothers and older female siblings or relatives as their sources of information on reproductive health issues (Haque and Faizunnisa, 2003).

2.1.2 Characteristics of Adolescence

Adolescence is traditionally a time of growth and development when young men and women experience great and rapid changes in their bodies, concerns, relationship and roles in the society. It is also a period when young people seek to stretch beyond protective shelter of the family and begin to create an independent vision and life. Adolescent age can also be grouped into three phases which are early adolescence (11-14 years), middle adolescence (14-17years) and late adolescence (18-20 years) (Ajuwon, 2000). However these age differences are arbitrary, the three phases may occur at different chronological ages for different individuals but they all have distinct characteristics.

Adolescents are learning to think abstractly, which allows them to plan their future. Experimentation and risk-taking are normal during adolescence and are part of the process of developing decision-making skills; adolescents are both positively and negatively influenced by their peers, whom they respect and admire. Adults play an important role in this regard and can help adolescents weigh the consequences of their behaviours (particularly risky behaviours) and help them to identify options. The influence of at least one positive adult and a nurturing family are protective factors during this period of development and can help adolescents cope with stress and develop resilience (UNFPA, 2009).

The early adolescence is characterized by features of puberty; the individual experiences physical, emotional and social development. As explained by UNFPA (2009), some of the characteristics at one end of the continuum, that is very young adolescents (10 to 14 years of age) may be physically, cognitively, emotionally and behaviourally closer to children than adults. Reasons for these are not farfetched as very young adolescents are just beginning to form their identities, which are shaped by internal and external influences.

2.1.2.1 Physical Development

The physical growth includes the growth spurt in which the size and shape of the body change markedly and accentuate the differences between boys and girls. There are signs of puberty

with the appearance of facial, auxiliary and pubic hair, testicular enlargement and deep voice for boys; the growth of auxiliary and pubic hair, development of breasts, broadening of hips and later onset of monthly menstrual cycle (menarche) occur in girls (FHI/USAID, 2000).

It is a period when the reproductive capacity of the individual is established. However there is great variation in the individual and in gender for the timing of these changes. In normal boys for example, there is roughly a five year range to reach puberty, from about 11 and 16 years; whereas in girls on the average, it usually starts about 2 years earlier and extends over a slightly shorter period. Although girls nowadays enter puberty at younger age of 8 and reach menarche (first menstruation) faster than the previous generations; this is due to improved health status and nutrition (Ajuwon, 2005).

Early adolescence often brings with it new concerns about body image and appearance. Both girls and boys who never before gave much thought to their looks may suddenly spend hours primping, worrying and complaining—about being too short, too tall, too fat, too skinny or too pimply. Body parts may grow at different times and rates. Hands and feet, for example, may grow faster than arms and legs (Birtwhistle, Lefkovitz, Meehan, Needham and Paul, 2004). Because movement of their bodies requires coordination of body parts—and because these parts are of changing proportions—young adolescents may be clumsy and awkward in their physical activities (Birtwhistle, Lefkovitz, Meehan, Needham and Paul, 2004).

According to Birtwhistle et al., (2004) the rate at which physical growth and development takes place also can influence other parts of an adolescent's life. An 11-year-old girl who has already reached puberty will have different interests than a girl who had not done so until she is 14. Young teens that bloom very early or very late may have special concerns. Late bloomers (especially boys) may feel they can't compete in sports with more physically developed classmates. Early bloomers (especially girls) may be pressured into adult situations before they are emotionally or mentally able to handle them. The combined effect of the age on the beginning for physical changes in puberty and the ways in which friends, classmates, family and the world around them respond to those changes can have long-lasting effects on an adolescent. Some young teens, however, like the idea that they are developing differently from their friends. For example, they may enjoy some advantages, especially in sports, over classmates who mature later. Whatever the rate of growth, many young teens have an

unrealistic view of themselves and need to be reassured that differences in growth rates are normal (Birtwhistle, et al., 2004).

2.1.2.2 Psychosocial Development

Psychosocial development in adolescence is a period when young people acquire sense of identity. At this time they have feeling and attitude towards themselves, their peers and family members. They also move towards independence from parents and elders and prefer to establish new interests and intense relationships thereby socializing with the environment and taking major life decisions. Because girls mature earlier, they tend to experience romantic interest before boys and consequently commence sexual activities earlier (McCauley and Salter, 2005; Sunmola, 2003).

These developmental changes are evident during the middle adolescent age, characterized by peer orientation with all the stereotypical adolescence preoccupations which include music, culture, appearance, language and behaviour. Late adolescence is a phase characterized by the adolescents taking up roles and responsibilities of adults. As adolescents become adults, they consider sexual relations, marriage and parenthood as signs of maturity and seek information about sex life from a variety of sources which include parents, teachers, friends, magazines, books and mass media (UNICEF, 2003). A large proportion of this information, though from diverse sources, is unfortunately incorrect, incomplete or misleading. Decision and actions based on this information by adolescents and youths render them vulnerable and at high risk of contracting various diseases such as HIV/AIDS and STIs. Their vulnerability is further compounded by the poor school attendance and economic hardship in the country and their indulgence in violence, drug and alcohol abuse (World Youth Report, 2003).

2.2 Sexual and Reproductive Health Problems among Adolescents

Adolescents are the age group at greatest risk for nearly all STIs (Hill and Biro, 2009). In 2007, WHO estimated that a third of the 333 million cases of curable STIs occurred among young people under the age of 25 (WHO, 2009). One out of four sexually active adolescent women is diagnosed with an STI every year (Hill and Biro, 2009; Yarber and Parrilo, 1992). The highest infection rates are in 20-24 year olds, followed by adolescents aged 15-19 years.

Young people were also more likely than adults to be re-infected after having been treated (Dehine and Riedner, 2005; WHO, 2009, Hill and Biro, 2009). More than 40% of adolescents

are subsequently infected by at least one STI other than the initial infecting organism (Fortenberry, 2009). Adolescents and young people make up only 25% of the sexually active population but represent almost 50% of all new STIs (Da Ros and Schmitt, 2008) and new STIs are still detected in adolescents with low and high viral loads of HIV (Trent, Chung and Clum, 2007).

Chlamydia trachomatis is the most common cause of STDs worldwide, with highest infection rates among females aged 15-24 years (Reitman, 2009). One third of all C. trachomatis cases worldwide occur among adolescents (Cates and Pheeters, 1997). Chlamydia has received significant attention as the most common bacterial STI and the primary aetiological culprit for epididymitis in males, PID, tubal infertility, and ectopic pregnancy in females (Debaltista, Martin and Jamieson, 2002).

Sexually Transmitted Infections found in adolescents include gonorrhoea, Chlamydia infection, syphilis, trichomoniasis, chancroid, genital herpes, genital warts, HIV infection and hepatitis B infection (WHO, 2009). Several STIs, in particular HIV and syphilis, can also be transmitted from mother to child during pregnancy and childbirth, and through blood products or tissue transfer (Mwapasa, Rogerson and Kwiek, 2006). There are more than 30 different sexually transmissible bacteria, viruses and parasites but only 19 of these are listed as the main causative agents of STIs (WHO, 2009). Bacterial pathogens include Neisseria gonorrhoeae (causes gonorrhoea or gonococcal infection), Chlamydia trachomatis (causes Chlamydial infections), Treponema pallidum (causes syphilis), Haemophilus ducreyi (causes chancroid), and Klebsiella granulomatis (previously known as Calymmatobacterium granulomatis causes granuloma inguinale or donovanosis).

Viral Sexually Transmitted Diseases (STDs) are caused by Human immunodeficiency virus (causes AIDS), HSV type 2 (causes genital herpes), HPV (causes genital warts and certain subtypes lead to cervical cancer in women), Hepatitis B virus (causes hepatitis and chronic cases may lead to cancer of the liver), HHV-8 causes Kaposis Sarcoma, and Cytomegalovirus (causes inflammation in a number of organs including the brain, the eye, and the bowel). Parasitic organisms include Trichomonas vaginalis (causes vaginal trichomoniasis), and Candida albicans which causes vulvovaginitis in women and inflammation of the glands penis and foreskin (balanoposthitis) in men (WHO, 2009).

The World Health Organisation estimates that worldwide, 1 out of 20 adolescents contract sexually transmitted infection each year, while one-fifth of the world's population infected with HIV and AIDS are in their 20s. This is an indication that they probably got infected during their adolescence but it is being manifested now in their 20s because of the long latency period of HIV/AIDS (AHI, 1996). Youth aged 15–24 years account for an estimated 42% of new HIV infections in people aged 15 and older. Nearly 80% of young people living with HIV live in sub-Saharan Africa, highlighting the critical importance of youth-focused HIV prevention strategies in this region (UNAIDS, 2012).

Adolescents are a key population for HIV prevention because during this stage of development, sexual behaviours are generally initiated and risk patterns established (Meschke, Bartholomae and Zentall, 2000). Approximately one-third to two-thirds of rape victims worldwide are 15 years old or younger, and young adults who are victims of abuse are more likely to engage in risky behaviours such as drug use and prostitution.

The high incidence rate of induced abortion among unmarried adolescent girls is another indication of unprotected sexual activities of this age group. Premarital childbearing especially among teenagers attending school is highly frowned at in Nigeria because it is seen as the end of education for the girl-child signifying the end of a worthy life. It is because of this among other reasons that some adolescents resort to illegal induced abortion, which at time result in complications. Adolescents constitute the majority of cases of abortion-related complications admitted in Nigeria hospitals (NARHS, 2003).

The reasons for this trend are many, including cognitive development, physiologic susceptibility, peer pressure, logistic issues, and specific sexual behaviours (Hill and Biro, 2009). In the USA, for example, 15 million people become infected with an STI each year (CDC, 2000; Cates and Pheeters, 1997). Adolescents aged 15-19 years account for approximately 3 million cases, meaning one out of four sexually active teenager reports an STI every year (Cates and Pheeters, 1997). This high prevalence will not only affect them during adolescence, but also have an impact on their adult years through long-term sequel, ectopic pregnancy, chronic abdominal pain, or infertility which can result from pelvic inflammatory disease (PID) (Hill and Biro, 2009). Most STIs are sub-clinical and asymptomatic, making them a hidden epidemic (Cheng and Lo, 2002).

2.3 Risk behaviours among adolescents

Risk behaviours are attitudes, lifestyle such as unprotected sexual intercourse, multiple sexual partners, sex for money, early sexual initiation, alcohol consumption, tobacco smoke and drug use. These predisposes an individual or group of people to markedly increased risk of having casual, unexpected sexual intercourse and by so doing, expose them to unwanted pregnancy sexually transmitted infections (STIs) and HIV/AIDS (Olugbenga, Adebimpe, and Akande, 2014). Risk behaviours are those that can have adverse effects on the overall development and well-being of youth, or that might prevent them from future successes and development.

2.3.1 Types of risky behaviours

Several risky behaviours are common among adolescent. Early sexual initiation, multiple sexual partners, limited contraceptives use and transactional sexual relationship have been identified as types of risk behaviours among adolescents that predispose them to unwanted pregnancy, unsafe abortion, HIV/AIDS and STIs.

2.3.2 Early sexual initiation

According to Darroch, Frost and Singh, (2001) early sexual initiation means having sexual intercourse for the first time before age 13 years. In the US, sexual debut before age 16 is generally considered early. How one defines early sexual intercourse should be defined according to statistical distribution of age at first intercourse within the country of residence. Findings from National AIDS and Reproductive Health Survey show that the median age of sexual debut among youths in Nigeria is 17 years in females and 21 years in males (NPC and ORC Macro, 2008). The age of initiation of sexual intercourse is one of the types of sexual risk behaviours, given that sexually active young women are at risk of multiple outcomes including early pregnancies, vesico- vagina fistula, and sexually transmitted infections. This is because young people who begin sexual activity early may appear more likely to have sex with high-risk partners or multiple partners and less likely to use condoms (WHO, 2000).

In Nigeria and all over the world, the long years of continued education has created a big gap between the age of puberty and age at marriage, thus increasing the likelihood of sexual initiation and unprotected premarital sex. In Northern regions of Nigeria, where child marriage is common, nearly 80% of girls marry by age 18 (NPC and ICF Macro, 2009**).** According to a study conducted by Duru, Ubajaka, Nnebue, Ifeadike and Okoro in 2013 among adolescents in Anambra, about one third of the respondents, 120 (34.37%) were

sexually active as at the time of their survey with 65.7% (230) being males and 34.3% (120) being females. The mean age at initiation of sexual activity was 15.08 years while modal age was 15 years and the youngest was 10 years. The findings indicating similarities with that of the National Demography Survey Data (NDHS) revealed that nearly half (48.6%) of adolescents aged 15-19 are sexually active (NPC/ORC Macro, 2008 and 2013).

2.3.3 Multiple sexual partners

Multiple sexual partners' means having sexual intercourse with more than one sex partners in the past 6 months. Sex with multiple sexual partners is common among Nigerian adolescents. Multiple sexual partners are associated with other risk behaviours including not disclosing HIV status to sex partners and less consistent use of condoms. Such risks include transmission of HIV/AIDS and STIs unwanted pregnancy, teenage births and induced abortions, often by quacks, are however associated with their sexual practice life threatening complications, maternal deaths, and morbidity in survivors being the result.

Amazigo, Silva, Kaufman and Obikeze, (1997) reported that in Niger State, 54% of sexually active adolescents have more than one sexual partner. Most of them were males (66%) than females (44%), more in school (55%) adolescent than out of school adolescents (53%). Among adolescents university students in Ibadan, 48% reported having many sexual partners (Makinwa- Adebusoye, 1992). A study reported benefits associated with multiple sexual partnership among adolescents. Generally, the perceived benefits that study participants associated with having several sexual partners centred on the perceived potential to reinforce their acceptance among their peers (Izugbara and Modo, 2007). The brief review suggests that most adolescents in the country are sexually experienced, with a tendency for multiple sex partnerships.

2.3.4 Limited contraceptive use

Contraception is the deliberate use of artificial birth control methods to prevent pregnancy as a consequence of sexual intercourse. The major forms of artificial birth controls are barrier methods, of which the most common is the condom; the contraceptive pills, which contains synthetic sex hormones that prevent ovulation in the female; intrauterine devices such as the coil, which prevent the fertilized ovum from implanting in the uterus. Limited contraceptive use such as, condoms or in consistent use of condoms during sexual intercourse is also a sexual risk behaviour among female adolescents as this predisposes them to unwanted

pregnancy, unsafe abortion, HIV/AIDS and STIs. Adolescents' specific attitudes toward pregnancy affect the likelihood that they will practice contraception and use condoms (Moore, 1995). Many of the female adolescents lack negotiating skills of condom use with their sexual partner due to fear of rejection resulting into serious health challenges. Female education has been seen as a key determinant of contraceptive use (NPC and ORC Macro, 2003).

Several studies show that sexually active Nigerian adolescents do not use contraceptives. It was reported by Abdullahi, (2012) from the National Demographic Health Survey conducted in 2010 that 90% of Nigerian adolescent women from the age of 14-24 in Northern Nigeria have no access to contraceptives. Also, another study in Nigeria indicates that more than 60% of women with unplanned pregnancy did not use contraceptives at the time of the study (Oladepo and Fayemi, 2011). Other reasons for poor contraceptives use include lack of awareness, limited access to contraception, fear of side effects and objection to its use by partners or family members.

2.3.5 Transactional sexual relationship

Transactional sexual relationships are sexual relationships where the giving of gifts or services is an important factor (Hunter, 2002). In western world, transactional sex is common in the form of sex in exchange for rent, phones, clothes, drinks, drugs, grades or school tuition. This sexual relationship is very common in sub-Saharan Africa where it involves relationship between older men and younger women or girls. The participants that engage in transactional sexual relationships frame themselves not in terms of prostitutes/clients, but rather as girlfriends/ boyfriends, or sugar babies/sugar daddies (Hoefinger, 2010; 2013).

Factors influencing involvement in transactional sex among students include poverty, broken homes, peer influence and desire to make cheap money. Hoefinger, (2013) found out that most of the students who engage in transactional sex rarely use measures of protection such as condoms and this predisposes them to SITs and HIV/AIDs. Most of the partners who engage students in risky sexual behaviour are of higher social and economic status. Wusu, (2011) reported that in Nigeria, about 10 percent of females and 26 percent of males aged 15-24 years engaged in transactional sex in 2005.

2.4 Level of Knowledge of Adolescents and their Parents on ARH issues

2.4.1 Knowledge of Sexual and Reproductive Health among Adolescents

Studies suggest that adolescents have limited knowledge about sexual and reproductive health, and know little about the natural processes of puberty, sexual health, pregnancy or reproduction (Shiferaw, Getahun and Asres, 2014; Muzammil, Kishore, Semwal, 2009) . This lack of knowledge about reproductive health including the emerging threat of HIV-AIDS may have grave consequences for the country.

In Nigeria, correct and adequate knowledge of HIV-AIDS transmission among young people remain low. Many adolescents have a misconception about AIDS and also believe that they are at low risk of contracting AIDS. In the National HIV and AIDS and Reproductive Health Survey (NARHS) done in Nigeria 2003 revealed that 74% of 1791 adolescents reported that they were at no risk at all of contracting AIDS and yet about 60% of them had unprotected sex within the last 12 months. Many adolescents are unaware of the threat posed to them by HIV and AIDS; a large proportion of them are affected by the virus daily and yet they have a misguided knowledge on prevention methods. Despite a prevailing high incidence of HIV among youth, comprehensive and correct knowledge about HIV among young people remains low (UNAIDS, 2010).

The absence of the traditional SRH communication channels has created a gap in the communication system (Maleta, 2006). As a result, traditional values on sexual and reproductive health are not passed on from parents to their children. Young people therefore grow in an environment without knowledge of values on sexual and reproductive health conduct (Maleta, 2006). Subsequently they turn to peers for answers to their sexual and reproductive health concerns. Unfortunately studies on youth reveal widespread myths and misconceptions about male sexuality among young people, which increase their vulnerability to STIs and HIV and AIDS despite considerable knowledge of sexual risks. Some of the myths include fear of being suspected that one does not function if they do not have sex; one is not a real man if they do not have sex and in keeping with the predominant view of masculinity is the view that contracting STI but not HIV is acceptable as part of the experience. Youth are eager to boast about their sexual conquests to their peers but embarrassed to discuss sexual issues with adults including their parents, (McAuliffe and Ntata, 1994; Nzioka, 2001).

The dominance of myths related to sexuality, the poor literacy levels of young people largely due to the poverty situation in the country and young people's inability to communicate SRH concerns with their parents mean that young people do not have a readily means to validate any distorted SRH information that they receive. More and more, young people therefore fall into traps where poor sexual health practices become inevitable as evidenced by the poor reproductive health indicators of young people discussed earlier in the chapter. Young people are therefore very vulnerable to unwanted sexual experiences, pregnancy, STIs and HIV if they largely depend on each other for SRH information (Maleta, 2006).

2.4.2 Knowledge of Sexual and Reproductive Health among Parents

Many parents may not want to admit that their adolescents are sexually active, this they cannot really know unless they ask their children directly. Since sexual activities among adolescents are usually hidden practices with no proof, parents will not be able to tell by mere looking at them. Many parents though admit that they know unmarried adolescents do get involve in sexual activities (Mturi, 2001).

Iliyasu, Aliyu, Abubakar and Galadanci (2012) documented that parents, especially mothers, need to be empowered with knowledge and skills for the provision of home-based sexuality education. This should supplement school-based sexuality education, peer-led education, and culturally appropriate mass media messaging. The majority of daughters acquired RH education from their mothers. Parents were more likely to discuss marriage, menstruation, courtship, premarital sex, and sexually transmitted infections (STIs) than other sex education topics. Mothers in northern Nigeria need to be empowered with knowledge and skills to improve the scope and quality of home-based RH education (Iliyasu et al, 2012).

According to Mturi, (2001) most adolescents that are sexually active and living with their parents usually do not want their parents to know of their sexual activities. This is made worse in a situation where parents do not communicate on sexual issues with children or where the adolescent cannot discuss such issues with parents. Some mothers are of the opinion that their adolescents (10-13 years) are too young to be involved in sexual activities or have any knowledge of sexual activities (Mturi, 2001).

However, it has been noted that boys and girls come into puberty at younger ages compared with previous generation (Akin-Otiko, 1998), and as a result of this many of them reach sexual maturity before they attain emotional or social maturity. It is suggested that parental communication on sexuality should begin as early as pre-adolescence because children tend to imbibe and believe what they hear from their parents.

In a research in Lesotho, parents in the urban areas accepted that it was okay for their older adolescents children to be sexually active before marriage (Mturi, 2001). This point to the fact that parents believe that the adolescent at this stage is knowledgeable and matured to engage in sexual activities; in reality the facts prove otherwise. Adolescents have little knowledge about sexuality, in Nigeria only 23% of adolescents know how to get contraception and only 36% know how conception takes place (Mturi, 2001).

2.5 Pattern of Parents and Adolescents Communication on Reproductive Health Issues

Communication about sexual health between parents and adolescents has been shown to have a protective influence on good relationships between parents and their children as well as healthy sexual behaviours of young people. Young people find the conversations on SRH matters with parents helpful and that they increase their comfort with parents when faced with other problems as well. Good relations between adolescents and parents are consistently associated with positive emotional functioning and healthy self-esteem (Soon, Kaida, Nkala, Dietrich, Cescon, Gray and Miller, 2013; Kaiser family foundation and Children Now 1998 and Flannery, 1994).

As gatekeepers, parents play an important role in influencing adolescent sexual decision-making and behaviour, including access to information about HIV and sexual health (HSH) (Whitaker and Miller, 2000). Positive communication between parents and youth about sex has been identified as influencing behaviour, including increased contraceptive use and delayed sexual debut, particularly for females (Halpern-Felsher, Kropp, Boyer, Tschann and Ellen, 2004; Markham, et al. 2010; Miller, Benson and Galbraith, 2001), and increased willingness to participate in HIV prevention trials (Otwombe, Dietrich, Sikkema, de Bruyn, van der Watt and Gray, 2009).

However, research shows that there are numerous aspects of communication that determine its effectiveness and ability to influence risk behaviour, including quality of the source (parent)

and recipient (adolescent), content of the message, how the message is communicated, and the context (Bastien, Kajula and Muhwezi 2011; Jaccard, Dodge and Dittus, 2002; Poulsen, Miller, Lin, Fasula, Vandenhoudt, Wyckoff, et al. 2010). While most parents and children desire open, direct and mutually valued discussions about sexuality, studies show that communication tends to be unidirectional, top-down and negative (Bastien et al. 2011; Wamoyi, et al 2010).

A study conducted in South Asia has revealed that parents often obstruct rather than facilitate informed choice in sexual and reproductive health issues (Bott, Jejeebhoy, Shah, and Puri, 2003). Adolescents commonly report that discussions with parents about sex or reproduction are taboo. There was no difference in parents from both rural areas and urban slums, as parents often want and expect their adolescent children, particularly daughters, to remain uninformed about sex (Bott, Jejeebhoy, Shah, and Puri, 2003).

One of the major outcomes associated with parent-child communication on SRH matters is risk reduction behaviours among youth. These behaviours include delayed sexual debut, condom use and prevention of pregnancy. Evidence shows that adolescents who discuss condoms with their mother are three times more likely to use a condom than those who never discussed condoms with their mothers or those who had discussed condoms after initial sexual intercourse. Strategically parent-child conversations on sexual health facilitate the development of risk reduction behaviours among couples as evidence shows that young people who report previous discussions of sexual matters with parents are seven and a half times more likely to feel able to communicate with a partner about AIDS than those who have not had such communication (Center for Diseases Control 2002; Shoop and Davidson 1994).

2.5.1 Contents of Parent-Child Communication on Adolescent Reproductive Health

Although many parents want their adolescent children to know about abstinence, contraception, and how to prevent HIV and other sexually transmitted infections (STIs), they often have difficulty communicating about sex (Akinwale et al, 2009; Nicholas, 2002). Most Nigerian cultures frame good parenting in terms of parental ability to shield children from early sexual knowledge (Akinwale et al, 2009). However, studies have shown that effective communication on sex does not encourage early initiation of intercourse but on the contrary, communication concerning sexual matters between parents and their adolescent children serve as a protective factor. This discussion helps adolescents establish individual values (Hadley,

Brown, Lescano, Kell, Spalding, DiClemente et al, 2009) and make sexually healthy decisions (Akinwale et al, 2009). Akinwale et al, (2009) recommended that more efforts be geared towards developing intervention programs targeting different categories of parents, particularly those with little or no education and older ones, who are usually not too comfortable in discussing issues relating to sexuality with their children in the home.

In the study in Soweto in South African by Soon et al (2013), adolescents want their parents to talk about the sensitive things like HIV, sex and so on like when you want to have sex use a condom and make sure you know the status of the person you want to have sex with whether it's a female or male (Soon et al, 2013). Adolescents reported that parents' unwillingness to discuss sensitive topics sometimes led to uncertainty and fear when faced with a difficult situation (Soon et al, 2013).

Matters on HIV-AIDS seems to be one of the major ARH issues discussed between parents and children as revealed by the study of Olarinde (2006) where 96.4% respondents reported discussing HIV-AIDS issues with their daughters while 97.9% have discussed same with sons. In a study in Delta State, Nigeria, 70% of 300 mothers said they set rules on what their young people watch or read the home (Okonkwo and Ilika, 2003). Instead of providing adolescents with factual information on ARH issues, studies have revealed that some parents who initiate sexuality discussion at this stage rather instill fear and communicate in authoritative one-way flow instructions that leave the adolescent more confused (Okonkwo et al. 2003).

2.5.2 Frequency of communication

Some studies have shown that open and frequent parent-adolescent communication about sex is associated with adolescent not having sex or postponing sexual debut (Casper, 1990). Many young people unknowingly engage in risky sexual behaviours when they are not guided aright; they end up bearing the consequences of such behaviour alone. Pregnancies among unmarried adolescents are usually unplanned; poor parental communication and information on sexuality and reproduction is grossly lacking (Mngadi, Zwane, Ahlberg and Ransjo-Arvidson 2013).

In a similar survey, data suggesting that communication between parents and children on topics of sexuality and reproduction in Bangladesh is limited; particularly between parents

and boys. The study found that although a majority of girls had discussed reproductive health issues with their mothers, very few boys had discussed such matters with their parents or other family members, (2% with fathers, 3% with mothers and 6% with other family members) (Sarah and Shireen, 2009).

Despite the fact that many studies have suggested that adolescents prefer mothers as source of ARH issues, the study of Akin-Otiko (1998) suggests that the frequency of the parent-child communication on ARH issues is usually determined by the courage of the adolescents to raise such issues as even some mothers that are aware of their adolescents sexual activities often find it difficult to discuss ARH issues openly and have to wait for the adolescent to initiate the discussion (Akin-Otiko, 1998).

2.5.3 Parent/Adolescent Quality of Communication on Reproductive Health

The quality of parent–child communication about sex is pivotal, and there is evidence that certain stylistic aspects of parent communication about sex are more important than the frequency of sexual communication in terms of risk associations (Wilson and Donenberg, 2004). Parents who are comfortable communicating with their adolescents about sex, are open and receptive during these conversations, give their adolescents direct advice about sex, and openly disagree with their children about sexual issues have adolescents who report fewer sexual risk behaviours (Donenberg and Pao, 2005, Wilson and Donenberg, 2004). Effective communication about sex could be a more difficult task for parents of Young Men that have Sex with Men (YMSM), making more frequent efforts by these parents less effective in reducing risk. For example, parents of YMSM frequently tell their sons they are worried they will contract HIV (LaSala, 2007).

Findings of Akin-Otiko (1998) suggests that the quality of adolescent reproductive health communication between parents and children is poor because even many parents that have ideas that their older adolescents do engage in sexual activities do not know how to communicate their concern freely to their adolescents in ways that will be helpful to the young person (Akin-Otiko, 1998). The study of Oladepo (1994) conducted in Nigeria among pregnant adolescents further strengthened this finding on poor communication by revealing that out of 127 pregnant adolescent sampled , none of the girls had ever communicated with their mothers on human sexuality (Oladepo, 1994). In a study of Hispanic teens, 77% of pregnant females reported having their first sexual experience by the 10th grade compared

with less than 20% of the non- pregnant teens (Adolph, Ramos, Linton, Grimes, 1995). Communication with their mothers was found to be significantly poorer among the young pregnant adolescent women compared to their non-pregnant counterparts.

Adolescents perceive discussions with parents about sexual and reproductive topics to be taboo and express embarrassment at the prospect. As a result, adolescents tend to get their information from peers and the media, despite the fact that adolescents often express a desire to be able to turn to parents for information and counsel. These papers clearly suggest a need for educators and parents to improve their ability to communicate with young people. Gender of adolescents and parents may be of importance concerning the quality of parent–adolescent communication. In general, adolescents report they communicate better with parents of the same sex (Youniss and Smaller 1985; Jackson, Bijstra, Oostra and Bosma 1998) while other studies have shown that both boys and girls communicated better with mothers than fathers (Barnes and Olson, 1985; Lanz, Iafrate, Rosnati and Scabini, 1999).

Many studies done on adolescent health seeking behaviour had recommended the need for parents' involvement on preventing adolescent's risk behaviour. A stable family and parental guidance is known to have a positive effect on adolescent's health seeking and prevention behaviours (Astou, 2002). Children generally tend to learn by example and doing what adults do, adolescents particular are at a cross road where they need correct information to form a healthy sexual behaviour. Though peer influence may be significant at this stage, many adolescents still prefer to seek directions and guidance from their parents (Hacker, Amare, Strunk and Horst, 2000).

Mothers have also been found to influence daughters' sexual behaviour once it has been initiated. For example, mother-daughter communication has been linked to daughters' having increased feelings of self-efficacy related to condom use and being less likely to have unprotected sex (Mayaud and Mabey, 2004) Girls who had conversations with their mothers about sexuality were also more likely to have fewer partners (Yarber and Parrillo, 1992).

2.6 Sources of Adolescent Reproductive Health Information Available to Parents and their Adolescents

In a study carried out by Balaiah and Chauhau (2006), it shows that preferences were given to IEC and counseling through interventional strategies. The intervention phase was initiated in the month of December, 2004 and consisted fourteen Information Education Communication programs in the experimental group on adolescent reproductive health were conducted for youths in Colleges covering 1405 students (745 boys and 660 girls). Two programs for orientation involving college teachers were also conducted. Two counseling centers have been started in two experimental colleges through which IEC and counseling are provided to college students and they are referred to health care facility if needed.

Parental care for children starts early in the child's life and run through the life time of the child, this care is more needed than ever at the adolescent years when the child is most prone to experimentation. As at 2001, In Nigeria, HIV prevalence among 15-19 years old ANC attendees tested was 5.9% and in 2003, this age group still accounted for a significant proportion of those infected with HIV and AIDS. Parent-child communication is still being emphasized as a key strategy in HIV and AIDS prevention among adolescents. Involvement of parents and other adults in communicating with adolescents is seen as basic strategy in prevention of HIV and AIDS among adolescents (UNAIDS, 2003).

According to Soon et al., (2013) in a study reported that adolescents express their desire to talk with their parents and/or caregivers when they are struggling with personal issues and wanted information and advice related to sex and relationships. One 16-year-old female stated: 'I wish we could talk about ways in which to handle relationships, for example if I do have a relationship I would like to know how to make sure that the boy is not abusive.' Mothers, in particular, were common sources of sexual health information; however, adolescents did not always feel that their parents were equipped with the skills or knowledge to discuss issues beyond abstinence.

While a study conducted in the United States of America (USA) found that over 50% of adolescents consult, at least, a parent about contraceptive use (Pistella and Bonati, 1998); mothers are in the best position to provide continuous guidance on sexual and reproductive health issues to their adolescents; they understand their children best and can easily manipulate the information they are exposed to in the home. Adolescent girls reported feeling

more free to talk about sex and birth control with their mothers than with any other person (Pistella et al. 1998).

In the study of Amoran and Fawole (2008) among out-of-school youth it was revealed that mothers had a greater influence on the youths on reproductive health than their fathers. This could be so because mothers generally spend more time with the children when compared with the fathers. The result of the aforementioned study revealed that 16.8% respondents reported that they had had comprehensive family life education by their fathers while 40.9% had from their mothers. Also, 22.3% of the youths reported strict monitoring by fathers compared with 36.9% by mothers (Amoran and Fawole, 2008). A study conducted in Liberia further strengthened this by revealing that mothers may disclose personal dating and sexuality experiences. This has been reported to be related to the adolescents' reporting a better functioning relationship with their mothers and having more conservative attitudes towards premarital sex (Solers, Miller and Whitaker, 2001).

However, from the study of Amoran and Fawole (2008), the commonest source of information on sexual matters was still the peers (32.1%), 30.2% from parents, 16.8% from teachers while 20.8% obtained information from other sources such as religious leaders, relatives, books and the mass media. Other factors that influence the outcome of sex education by parents include the content of discussion and the timing of the discussion. The influence of parent-teenager discussion depends on what parent say and how they say it (Amoran and Fawole, 2008).

In many households in Nigeria, mothers are usually the ones saddled with the duty of passing information on sexuality and reproductive health to their children (Astou, Morisky, Alfonso and Tzui, 2002). Mothers are in the best position to provide continuous guidance on HIV and AIDS prevention to their adolescent, they understand their children best and can easily manipulate the information they are exposed to in the home. Also, in the traditional African setting, the mothers and not the fathers are the ones expected to pass on such information to their children. Studies done on adolescent health seeking behaviour recommends that parents need to be involved in preventing adolescent's risky behaviour. A stable home and parental guidance is known to have a positive effect on adolescent's health seeking and prevention behaviour (Astou et al, 2002).

Contrary to many beliefs, adolescents still tend to learn by example and doing what they observe their parents do, this is most critical because they are at a cross road. Adolescent need correct quality information needed to form a healthy sexual behaviour. Parents must not only be armed with the knowledge needed but, must be willing to impart such information to the adolescents (Akin- Otiko, 1998). Whatever happens between the ages 10-19 years whether good or bad, especially in relations to HIV and AIDS prevention shapes how the adolescents live out their lives as adults (Mensch, Bruce and Greence, 1998). HIV and AIDS being a sex related issue requires more awareness and education now than before because in high-prevalence, sub-Saharan Africa, the main mode of transmission among young people is through heterosexual intercourse (UNAIDS et al., 2004).

It therefore, becomes imperative for parents to make sure that transition to adulthood happens under favourable conditions. Education on HIV and AIDS prevention should begin at an early age, before children and young people are exposed to risks, and should be sustained over time (HEP/UNESCO, 2004). Unlike what many parents believe, adolescent prefer their parents to peers as their sources of information on sexuality and reproductive health matters (Mturi, 2001).

Studies in many countries including Nigeria have found that parents are influential source of information and advice for children. Parents play an important role in the sexual health of their adolescent children (Eastman, Corona and Schuster, 2006). Parent/Adult Child communication has been shown to influence adolescent reproductive health behaviour. Adults need to pass correct information across to youths to help them make proper decisions that will promote their health (Iyaniwura, 2006).

Communication between parents and adolescents about adolescents' sexual behaviour has been studied. However, the types of issues on which adolescents are willing to communicate with their parents have been scarcely discussed. A survey was conducted among a random sample of 1,204 junior high school students in Taipei. The survey probed into adolescents' communication with their parents as related to sex, including physical development, sexuality, choice of partner, frequency of dating, whom to date, and intimacy during dating. Analysis showed that physical development was the topic most often discussed. Talking about dating was discussed less than the other three topics. Moreover, girls were more likely to communicate with their parents than boys about all sex issues (Yang and Wu, 2006).

Studies have shown that young women who are encouraged to question traditional gender roles and those who have high educational aspirations are more likely to avoid teen pregnancy (Plotnick and Butler 1991). It has been documented that teens that have healthy parent-child communication, high self-esteem and high educational aspirations are more likely to postpone childbearing (Leland and Barth, 1993). When parents talk to and affirm the value of their children, young people are more likely to develop positive, healthy attitudes about themselves. Research shows that positive communication between parents and their children can help young people establish individual values and make healthy decisions.

Initiating conversations about the facts of life may be difficult for some parents because they did not grow up in an environment where the subject was discussed. Some parents may be afraid they do not know the right answers or feel confused about the proper amount of information to offer. As a result of adults' reticence to address these issues, young people tend to rely on peers and mass media for information about sex, reproduction and STIs including HIV-AIDS (Bott, Jejeebhoy, Shah and Puri, 2003).

2.7 Roles of Parents in Adolescent Reproductive Health

In the African setting, parents play a significant role in moulding the characters and behaviour of their children. Norms, values and beliefs are passed from one generation to another. Mothers, particularly, serve as role models in shaping their adolescent children's perception on gender roles, reproductive and sexual behaviours (Focus on Young Adult, 1998). When parents affirm the value of their children, young people more often develop positive, healthy attitudes about themselves (Lagina, 2002). Individuals between the ages 10-19 are usually prone to experimental and risky behaviour.

Adolescence is a very tender stage in human growth and development. At adolescence, human beings begin to experience physical and social changes. With the outbreak and subsequent prevalence of the HIV/AIDS in sub Saharan Africa, and its debilitating effect, especially, on the productive segment of the population, prevention of the infection has become a priority with a focus on the adolescents who are most vulnerable.

In the traditional Uganda setting for instance, the father is the traditional channel for socializing the adolescent girls into sex and marriage (Muyinda, Nakuya, Whitworth and Pool, 2004). In many more traditional settings in Africa, parents were not the ones expected to

educate their adolescent children on sexuality; appointed guardians for these roles were often available especially during initiation ceremonies (Biddlecom, Awusabo-Asare and Bankole, 2009). However, things are changing as parents often tend to divide their sexuality education communication with their children based on gender, father often find it easier to communicate with their sons on such issues while mothers tend to communicate better with their daughters. Studies have showed that adolescents often practice less risky behaviours when there is a sense of connectedness to their parents (Slap, Huang, Daniyam, Zink and Succop, 2003).

Frequent communication about sex is associated with adolescents not having sex or postponing sexual debut (Casper, 1990). Positive communication between parents and adolescents helps to establish individual value and healthy sexual behaviour among adolescents (Lagina, 2002). Talking about sexuality issues with children is generally viewed as an abomination in Nigeria, this could stream from that fact that most parents do not have a firm grip of the sexuality issues and lack the skills required to communicative effectively with their children.

Since discussion of sex, HIV and AIDS and family planning between parents and children is a recent strategy being employed to curb or reduce adolescent susceptibility to infection, many parents need to be given time to get used to the idea as they themselves had no fore experience in interactive relationship between parents and children. In general, many mothers find it difficult to talk to their adolescent children on sexual health issues because they do not want to expose their own lack of knowledge on these issues (Okonkwo, et al 2003).

Studies also show that parent worry that discussing sexuality with their children will encourage the adolescent to experiment with the knowledge. Inspite of all these constraints, mothers are supposed to be the first to teach their children about sexuality education, and should be interested in knowing what their children already know and do in sexuality (Moronkola, Osowole and Olubela, 2002). When mothers fail to discuss sexuality with their adolescents, or communicate about it in a diachronic manner, adolescents tend to build gap filled with distrust, they also shy away from discussing personal sexuality issues, as they will not share confidentiality with their mothers. Studies have shown that mothers' hostility towards communicating sexuality issues with their adolescents was significantly correlated with adolescents' distrusts for their mothers while perceiving little maternal support (Paley et al, 2000).

2.8 Factors Affecting Parent-Adolescent/Child Communication

Communication about sexual health between parents and adolescents has been shown to have a protective influence on behaviours that reduce the risk of HIV transmission. This study explored experiences of HIV and sexual health (HSH) communication between parents and/or caregivers and adolescents in an urban HIV-endemic community in Southern Africa (Soon, Kaida, Nkala, Dietrich, Cescon, Gray and Miller, 2013). Adolescents identified emotional, physical and socio-cultural barriers to initiating HSH communication with parents and caregivers including fear of verbal warnings, threats and physical assault (Soon et al, 2013).

Youth aged 15–24 years account for an estimated 42% of new HIV infections in people aged 15 and older. Nearly 80% of young people living with HIV live in sub-Saharan Africa, highlighting the critical importance of youth-focused HIV prevention strategies in this region (UNAIDS, 2012). Adolescents are a key population for HIV prevention because during this stage of development, sexual behaviours are generally initiated and risk patterns established (Meschke, Bartholomae and Zentall, 2000).

Parents play an important role in influencing adolescent sexual decision-making and behaviour, including access to information about HIV and sexual health (HSH) (Whitaker and Miller, 2000). Positive communication between parents and youth about sex has been identified as influencing behaviour, including increased contraceptive use and delayed sexual debut, particularly for females (Halpern-Felsher, Kropp, Boyer, Tschann and Ellen 2004; Markham, Lormand, Gloppen, Peskin, Flores, Low, et al. 2010; Miller, Benson and Galbraith, 2001), and increased willingness to participate in HIV prevention trials (Otwombe, Dietrich, Sikkema, de Bruyn, van der Watt and Gray, 2009).

However, research shows that there are numerous aspects of communication that determine its effectiveness and ability to influence risk behaviour, including qualities of the source (parent) and recipient (adolescent), content of the message, how the message is communicated, and the context (Bastien, Kajula and Muhwezi 2011; Jaccard, Dodge and Dittus 2002; Poulsen, Miller, Lin, Fasula, Vandenhoudt and Wyckoff 2010).

While most parents and children desire open, direct and mutually valued discussions about sexuality, studies show that communication tends to be unidirectional, top-down and negative (Bastien et al. 2011; Wamoyi, et al 2010). Despite a prevailing high incidence of HIV among

youth, comprehensive and correct knowledge about HIV among young people remains low (UNAIDS, 2010).

Parents should talk about the sensitive things like HIV, sex and so on like when you want to have sex use a condom and that make sure you know the status of the person you want to have sex with whether it's a female or male (Soon et al, 2013). Adolescents reported that parents' unwillingness to discuss sensitive topics sometimes led to uncertainty and fear when faced with a difficult situation (Soon et al, 2013).

2.8.1 Factors Promoting Parent-Child Communication

Both mothers and daughters mentioned television programs as an entry point for communication. Sensitive topics could be broached by discussing them in regard to a television plot line rather than in relation to personal needs or desires for information (Yasmine and Heba, 2012). Despite the many communication barriers that emerged, the study findings demonstrate that both mothers and daughters were willing to talk and listen to each other. Addressing the lack of information, misconceptions, and the barriers to effective communication with their mothers can lead to improved knowledge for adolescent girls.

The study also revealed that mothers and daughters, though willing, had difficulty initiating and having conversations about SRH. A noteworthy finding is that television and other forms of media can serve as valuable entry points for these conversations. This suggests an opportunity for researchers and health experts to work with media to ensure that when these topics are included as storylines, factual information is portrayed to avoid perpetuating misinformation (Yasmine and Heba, 2012).

With greater knowledge about SRH issues and a feeling of support from within the family, girls will be better able to face puberty and adolescence in healthy and empowered ways. In the 2009 study done by Akinwale et al (2009), younger parents were more likely to discuss about sexuality issues than older parents.

In view of the findings of study conducted in North-western Tanzania, it was recommended that more efforts be geared towards developing intervention programs targeting different categories of parents, particularly those with little or no education and older ones, who are

usually not too comfortable in discussing issues relating to sexuality with their children in the home (Wamoyi, et al, 2010)

2.8.2 Factors inhibiting Parent-Child Communication

In many parts of the world, adolescents are poorly informed about their health, body biological processes, sexuality, and physical well-being. Adolescent girls in particular are often kept from learning about sexuality and reproductive health (SRH) issues because of cultural and religious sensitivities.

Mothers and daughters in rural areas of Alexandra Egypt identified barriers to initiating communication. Many mothers stated that they should only initiate discussions about SRH topics with their daughters on certain occasions, such as a life change or an event, or when girls seek certain information or ask for advice. Daughters reported that they were reluctant to ask their mothers for this type of information because of embarrassment, fear of judgment, and perceived lack of their mother's interest or willingness, time, and trust (Yasemine and Heba, 2012).

A significant factor that prevented many girls from initiating such a discussion was fear that their mothers would be suspicious of them and question their morals and behaviour. One daughter said, "Sometimes when I feel that I want to know more about a certain issue I heard about or something I don't understand... I want to ask my mother. So as not to make her suspicious of me and ask me where I learned about the topic, I tell her I heard about it from the Turkish television series." A study that explored experiences of HIV and sexual health (HSH) communication between parents and/or caregivers and adolescents in an urban HIV-endemic community in Southern Africa identified emotional, physical and socio-cultural barriers to initiating HSH communication with parents and caregivers including fear of verbal warnings, threats and physical assault (Soon et al, 2013).

Anxiety of exposing children to pre-marital sex is a negative driver in parent-child communication on ARH issues because as adolescents begin to have more interest in the opposite gender, parents' anxiety grows stronger and become more protective. Parents experience new feelings and attitudes when their children begin to develop sexual features in puberty. It becomes more difficult for parents to talk freely with their children finding it

difficult to answer their question as carefully and honestly as they used do when the children were younger (Soon et al, 2013).

Trado-cultural beliefs have been one of the major factors inhibiting quality communication between parent and children on ARH issues because sexuality is seen as a forbidden subject of discussion between parents and children especially in the African setting. WHO (2007) observes that parents recognize that sexual norms are changing and that premarital sex has become common and unavoidable among unmarried youth. However parents are torn between their desire to adhere to traditional norms and the need to protect the health and well being of their unmarried children.

Lack of required skill in effective communication on ARH issues is likely to be another inhibitor on frequency of such communication as a study conducted among mothers in a state in Nigeria revealed that many mothers advocate that reproductive health information be provided for young people in schools, this is an indication that mothers are aware of the fact that adolescents could be sexually active, thus they need all the correct and appropriate information needed to make right choices; however the mothers do not see themselves adequately prepared to fulfill this role.

Okonkwo and Ilika (2003) found in a study done on maternal attitudes and values to youth sexuality related activities in Delta state Nigeria, that 85% of 300 mothers believed that reproductive health information should be given in school because lack of such information have resulted in high incidence of unintended pregnancy and sexually transmitted infection including HIV and AIDS. Many of these mothers supported the use of contraceptives and encourage access to condom among adolescents (Okonkwo et al, 2003).

Urban migration has led to disintegration in the traditional system and has affected communication with young people as more young people grow out of the traditional system (Maleta, 2006). Subsequently the majority of youths rely on friends as primary sources of sexual and reproductive health information while this communication remains minimal in the family.

Young people therefore view SRH matters as taboo issues and are embarrassed to communicate them with parents, hence their preference to fellow peers (Maluwa, Aggleton

and Parker, 2002). Lack of clear and adequate information on SRH matters to young people at this stage coupled with poor understanding of reproductive health concepts and the strong desire to experiment increases the vulnerability of young people to poor sexual health practices. Widespread myths about sexuality, masculinity and peer pressure among young people further increase the level of vulnerability of the youth to poor sexual health practices. For example myths that threaten the ego and the future well being of young people such as being suspected to not function sexually if young men do not have sex (Nzioka, 2001).

Ignoring adult guidance to sexuality needs of youth at this stage or entrusting the responsibility of SRH guidance to fellow young people could have grave consequences as all of them are struggling to cope with the physical and emotional changes. Entrusting SRH guidance for young people to peers further burdens the peer educators with role conflicts as trainers, learners and social beings who struggle with their needs and expectations of others. Without strong parental support and guidance with open and honest communication on controversial issues, young people are likely to fall into confusion and make poor sexual health choices.

According to FMOH and WHO (2007) in the National Strategic Framework on the Health and Development of Adolescent and the young people in Nigeria, parents and guardians can pass a sound traditional values to young people and provide them with correct sources of information and advices on the matters relating to their health and development. The document stressed that they can improve communication with their children and ensures that young people do not engage in harmful practices and behaviour.

The document justified that since parents remain close to the young people and can exercise some degree of authority over their actions, they are vital to any configuration of social factors shaping their health and development. From time to time, peers and the community member may be more or less influential, but parents and family are constant elements in most young people's live despite fluctuation in their relative importance (FMOH and WHO, 2007).

Table 2.1a Interventions Promoting Parent/child Communication

SN	Authors	Year	Setting	Study Population	Findings
1.	Blake, Simkin, Ledsky, Perkin and Calabrese	2001	USA	Adolescents	Adolescents who received the enhanced curriculum reported greater self-efficacy for refusing high-risk behaviors than did those who received the classroom instruction only (mean scores, 16.8 vs. 15.8). They also reported less intention to have sex before finishing high school (0.4 vs. 0.5), and more frequent parent-child communications about prevention (1.6 vs. 1.0) and sexual consequences (1.6 vs. 1.1). In all significant comparisons, the direction of the findings favored adolescents who received the enhanced curriculum. Dose-response relationships supported the findings.
2.	Bhana et al.	2004	South Africa (urban & semi-rural)	A total of 124 families, assigned to intervention or comparison group participated in the pilot phase	The intervention group reportedly demonstrated a shift from passive aggressive and manipulative communication styles to more assertive styles in relation to comparison group.
3.	Villarruel, Cherry, Cabriales, Ronis, and Zhou	2008	Mexico	Mexican Parent and adolescents	Parents in the HIV risk reduction intervention reported significantly more general communication ($p < .005$), more sexual risk communication ($p < .001$) and more comfort with communication ($p < .001$) than parents in the control intervention. Behavioral, normative, and control beliefs significantly mediated the effect of the intervention on all communication outcomes.
4.	Bastien et al.	2008	Tanzania (urban & rural)	Students (2026) in 1992 and (2069) in 2005.	Students reported higher levels of exposure to information and communication from all sources in 2005 than 1992. Students reported significantly more frequent discussion about AIDS with parents and others in the social network in 2005 in comparison to 1992

Table 2.1b Interventions Promoting Parent/child Communication contd.

SN	Authors	Year	Setting	Study Population	Findings
5.	Bell et al.	2008	South Africa (peri-urban)	Youth (aged 9-13) and their families (245 intervention families rearing 281 children, and 233 control families rearing 298 children).	Findings suggest greater intervention effects on caregivers than on youth. Caregiver findings show significant intervention group differences in comparison to control with regard to caregiver monitoring and control, as well as increased frequency and comfort discussing HIV/AIDS and sexuality with children, among other outcomes. With regard to youth, findings showed an increase in HIV knowledge in the intervention group compared to the control, as well as lower levels of HIV-related stigma.
6.	Phetla et al.,	2008	South Africa (rural)	Women from poorest households	Both qualitative and quantitative findings indicate the intervention improved participants' motivation and skills to engage with young people about sexuality. Interviews indicated women felt greater confidence to talk to children, used clearer messages instead of vague ones, and a range of communicative strategies. Quantitative data showed a significant increase in proportion of women at follow-up reporting having talked about sexual issues with children compared to the control group (80% vs. 49%, adjusted risk ratio 1.59 (1.31-1.93). Young people confirmed that mothers and relatives altered their communication style and content after exposure to the intervention.

Table 2.1c Interventions Promoting Parent/child Communication contd.

SN	Authors	Year	Setting	Study Population	Findings
7.	Poulsen et al.	2010	United States and Kenya (rural)	Adults who are primary caregiver to a child aged 10-12 years at baseline and lived with the child for past 3 years	40% of parents in Kenya had never talked to their child about HIV/AIDS, with 38% of parents thought that talking about sexuality encourages sex, and 61% believing their child was too young to learn about sex. Communication was associated with parental perceptions of child readiness to learn about sexuality, if they had received information to educate their child about sex and if they had greater sexual communication responsiveness (skill, comfort & confidence).
8.	Vandenhoudt et al.,	2010	United States and Kenya (rural)	Parents	High attendance from parents at all intervention sessions and reported being satisfied with the intervention, finding it helpful and a confidence booster. The majority also reported having shared intervention information with persons other than their child, indicating high levels of dissemination. Significant improvement in parental attitudes concerning sexuality education, with parents reporting greater use of positive reinforcement and monitoring.
9.	Wamoyi et al.	2010	Tanzania (rural)	Eight weeks of participant observation, 17 Focus Group Discussions and 46 in-depth interviews were conducted with young people aged 14-24 years and parents of those in this age group.	A lack of trust in what they could say to their parents was reported by young people for fear of punishment. Parents were constrained in their communication due to lack of knowledge and restrictive gender and cultural norms

2.9 Conceptual frame work for the study

PRECEEDE-PROCEED was adopted for this study

2.9.1 The PRECEDE-PROCEED Model

Green, Kreuter, Deeds and Patidge (1980), developed the precede framework. The model helps to identify the contributory factors to health problems. This model explained the factors important to an expected behaviour. The model is useful in behavioural diagnosis and evaluation, to create avenue for improvement or new intervention strategies where necessary. The model is broadly defined to include epidemiological, social environment and economic indicators.

The Epidemiological and social diagnosis phases relates to the issues of quality of life of individuals and communities. The problem that negate the impact of sexuality education on adolescents are socially indicated by health and health related problem. These include welfare problem, however, issues like sexuality information, sexual misconduct, teenage pregnancy and abortion handled, economic hardship, shying away from responsibilities, indigenous cultural beliefs, negative opinions of significant others also had impact on the adolescent.

The behavioural and non behavioural diagnosis involves issues such as compliance to the context of sexuality communication exchange with parents and certain information given could have positive or negative impact on the health of the recipient. Precaution and measures has to be taken as to how they respond to advice when they receive ARH information from their Parents.

The aim of PRECEDE-PROCEED model was to provide a comprehensive framework for assessing health and quality-of-life needs and for designing, implementing, and evaluating health promotion and other public health programs to meet those needs. PRECEDE stands for (Predisposing, Reinforcing, and Enabling Constructs in Educational Diagnosis and Evaluation) while the PROCEED stands for Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development.

The educational diagnosis assess factors antecedent to performance of behaviour -the predisposing, enabling and reinforcing factors affecting effective and application of sexuality

communication among parents and their adolescents and specifications of appropriate strategies to be used in solving encountered problems.

- **Predisposing factors**, which motivate or provide a reason behind any behaviour; these include knowledge, attitudes, cultural beliefs, norms and perception.
- **Enabling factors**, refer to their skills and competencies, resources and favourable environment which enable persons to act on their predispositions; these factors include available resources, supportive policies, assistance and services.
- **Reinforcing factors**, Reinforcing factors relate to things that will increase the occurrence or strengthen the behaviour. This includes perception and acceptance to communicate with adolescents, which come into play after behaviour has been initiated; they encourage repetition or persistence of behaviours by providing continuing rewards or incentives. Social support praise, reassurance, and symptom relief might all be considered reinforcing factors.

  Among the contributions of the PRECEDE model is that it has encouraged and facilitated more systematic and comprehensive planning of public health programs. Sometimes practitioners and researchers attempt to address a specific health or quality-of-life issue in a particular group of people without knowing whether those people consider the issue to be important. Other times, they choose interventions they are comfortable using rather than searching for the most appropriate intervention for a particular population. Yet, what has worked for one group of people may not necessarily work for another, given how greatly people differ in their priorities, values, and behaviours (Fig. 2.1).

PRECEDE therefore begin by engaging the population of interest themselves in a process of identifying their most important health or quality-of-life issues. Then the model guides researchers and practitioners to determine what causes those issue that is, what must precede them. This way, interventions can be designed based not on speculation but, rather, on a clear understanding of what factors influence the health and quality-of-life issues in that population. As well, the progression from phase to phase within PRECEDE allows the practitioner to establish priorities in each phase that help narrow the focus in each subsequent phase so as to arrive at a tightly defined subset of factors as targets for intervention. This is essential, since no single program could afford to address all the predisposing, enabling and reinforcing

factors for all of the behaviours, lifestyles and environments that influence all of the health and quality-of-life issues of interest.

PRECEDE has four phases, which are:

Phase 1: Identifying the ultimate desired outcome.

Phase 2: Identifying and setting priorities among health or community issues and their behavioural and environmental determinants that stand in the way of achieving that result, or conditions that have to be attained to achieve that result; and identifying the behaviours, lifestyles, and/or environmental factors that affect those issues or conditions.

Phase 3: Identifying the predisposing, enabling, and reinforcing factors that can affect the behaviours, attitudes, and environmental factors given priority in Phase 2.

Phase 4: Identifying the administrative and policy factors that influence what can be implemented.

PROCEED has four phases that cover the actual implementation of the intervention and the careful evaluation of the intervention, working back to the original starting point – the ultimate desired outcome of the process.

Phase 5: Implementation: The design and actual conducting of the intervention.

Phase 6: Process evaluation: Ensuring that the intervention was carried out as planned.

Phase 7: Impact evaluation: Find out if the intervention is having the desired impact on the target population.

Phase 8: Outcome evaluation: Find out if the intervention leads to the outcome (the desired result) that was envisioned in Phase 1.

Analysis of Effect of Training on parents of adolescent on ARH using Precede - Proceed Model

PRECEED

Predisposing factors: Knowledge of parents and adolescents on ARH, Adolescent communication; their perceptions about ARH communication determine the parents' level of readiness to communicate with their adolescent's children. These were incorporated into the survey questionnaire.

Enabling factors: The enabling factors included availability of time for discussion; living with the adolescents' children and creating suitable environment for the discussion. This also

includes knowledge of ARH issues which makes it possible for individual parent to discuss ARH issues with their adolescent children.

Reinforcing factors: Monitoring, supervisory guidance and evaluation of the implementation activities and peer influence, support from the significant are some of the factors that would encourage parents to open up communication with their adolescent (Figure 2.1).

This model was used to design the instrument for the study. Issues documented under the predisposing factors were the knowledge of both the adolescents and their parents while the enabling factors are the capacity building provided the parents in discussing ARH issues with their adolescents and the reinforcing factors were monthly meetings of research student with the parents to provide supportive supervision and monitoring.

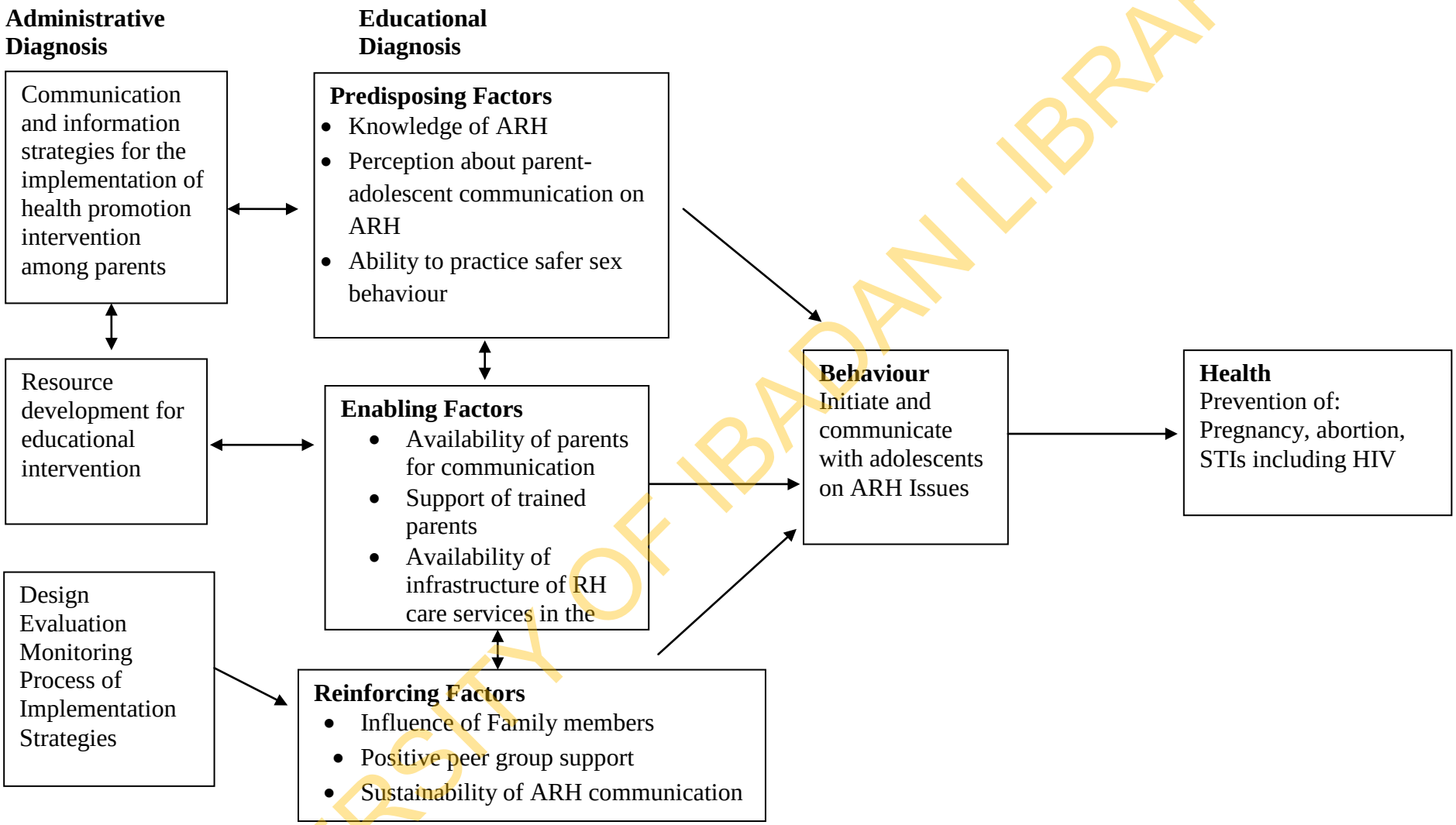


Figure 2.1: Application of PRECEDE-PROCEED model to the effects of educational interventions on Knowledge and Quality of Reproductive Health Communication between Parents and their Adolescents in two Communities in Ibadan, Nigeria

2.9.2 Application of the Conceptual Framework

The model focused on behavioural intervention, addressing how cognitive processes contribute to behaviours. The model was grounded in psychological understanding of the ecological framework of human behaviour. It focuses attention on identifying gaps within the personal- level predispositions of knowledge, perception and attitude that detract from the desired behaviour. Interventions are therefore designed to specifically address these concerns to improve knowledge, perception and attitude that contribute to the desired behaviour. The PRECEDE model provided opportunity to diagnose the health related problem among the parents and their adolescents and identified a gap in the knowledge; proffered solution using the existing structures in the community to provide educational intervention. Actually, the model identifies parents' support and attitude towards ARH as reinforcing factors in the dynamic of Safe Reproductive health behaviour of the adolescents. Enabling factors includes available infrastructure of reproductive health care services in the community/school and policy

The PRECEDE model was operationalised in designing tool for this study and this provided opportunity to diagnose the health related problem among the parents and their adolescent and identified gaps in the knowledge of ARH issues and pattern, frequency and quality of communication were used to organize training intervention for the parents. On the predisposing factors, knowledge of ARH of both parents and adolescent were measured by responding to the set of questions on ways of preventing pregnancy, mode of transmission of STI/HIV. Enabling factors were measured by documenting their sources of ARH information and pattern and frequency of ARH communication between parents and their adolescent. Finally, reinforcing factors were the factors that inhibit or promote parent/child communication. Also included as reinforcing factor was the weekly meeting with the parents in the EG community. All these were analysed and used to design training intervention for the parents.

The data provided a basis for choosing the intervention that were used as explained in Chapter Four. The training activities empowered the parents with necessary skill to communicate ARH issues with their adolescents and thereby reducing sexual practices. Training of parents on ARH to effectively communicate ARH issues with their adolescent are some of the enabling factors that would assist parents in the delivery of ARH in their various homes. Thus training was used to provide solutions to the identified gaps.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction

The chapter describes the research process and covers issues relating to research design and scope, study location, study population, methods and instruments for data collection and sampling procedure as well as validity and reliability of the instruments used. It also describes the data collection process, data management and analysis, the implementation of the intervention, limitations of the study and ethical considerations.

3.2 Research Design

The study was quasi-experimental in design involving parents and their adolescent children in two Local Government Areas (LGA) - Ido and Egbeda LGAs in Oyo state, Nigeria (Table 3.1 and Figure 3.1). Two major communities (towns) in these LGAs were randomly allocated into two study arms by balloting: these were Egbeda as the Experimental Group (EG) and Ido as Control Group (CG). The study consisted of three main phases: a needs assessment, intervention and a 6-month follow-up activity (Figure 3.1).

With the quasi-experimental design, the investigator was able to observe the changes that occurred over time with dependent variables. Such changes included initiation and increased frequency of ARH communication between parents and their adolescent children, increase in ARH knowledge, and improvement in quality of communication and effects on sexual behaviour. The estimated distance between the two LGAs is 22 km^2. The design was also used to control for the potential bias variable through randomization.

Table 3.1: Summary of research design

Groups	**Measurements**		
	Baseline data collection	Intervention (Six months)	Follow-up survey and evaluation
Experimental group (EG)	O_1	X	O_2
Control group (CG)	O_3	-	O_4

O_1 = Baseline data collection at EG **O_2**

O_3 = Baseline data collection at CG **O_4**

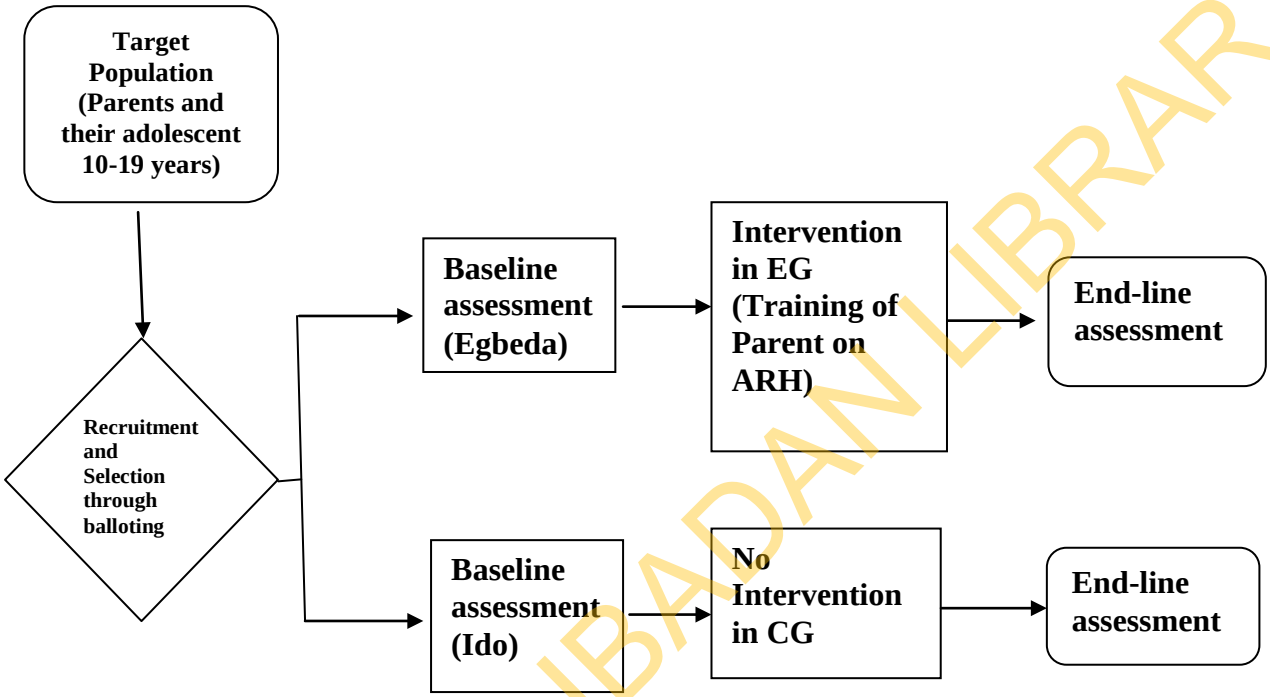


Figure 3.1 Quasi-experimental design

3.3 Scope of the Study

The scope of the study was limited to parents and their adolescents aged 10-19 years in selected households in the two LGAs. The communities in Egbeda comprised of Temidire, Mosafejo, Irewunmi, Tanmo and Road D while Ido, Idi Igbaro, Camp/Farm Settlement are the communities in Ido LGA. Pre-test and post-test were conducted to measure the outcome of intervention rendered by the parents on knowledge of adolescent reproductive health issues including: initiation, frequency and improvement in adolescent reproductive health communication between parents and their adolescent and quality of RH communication. Adolescent reproductive health issues considered in this study include STIs, HIV/AIDS, teenage pregnancy prevention and adolescent physiological development.

3.4 Description of Study Sites

The study sites were Egbeda and Ido Local Government Areas of Oyo State. Egbeda LGA was randomly allocated as intervention while Ido LGA, as control. The LGAs were selected because of the researcher's assumption that they are similar in nature and characteristics, both being peri-urban LGAs. Details about the features of each LGA are provided below.

3.4.1 Egbeda Local Government Area (Intervention)

Egbeda is a peri-urban LGA which was carved out of Lagelu LGA in 1989; it is located in the eastern part of the state and is about 12km from Ibadan. It is bounded in the north by Lagelu LGA, in the south by Ibadan north east, in the west by Ona-ora and in the east by Isokan LGA of Osun State. The major road in the LGA is the Ibadan-Ife express road. There are 11 political wards in the LGA namely Erunmu, Ayede, Owobale, Ajiwogbo, Olodo, Monatan, Wakajaiye, Osengere, Egbeda, Alakia and Olubadan. The local government has a second class Oba with the title *Elegbeda* of Egbeda. The major sources of water in the local government area are wells and bore holes.

The local government has an estimated total population of 311,281 as at 2013 when the study was conducted. Of this number, the estimated target population of adolescents is 15,564 (NPHCDA, 2008) representing 5% of the population. There are 21 government-owned health facilities and lots of private and mission owned health facilities scattered all over the local government. Majority of the inhabitants are Yorubas with very few Igbos, Hausas, Fulanis, Tivs and Idomas. The major occupation of the inhabitants in the rural communities is farming while majority of those in the semi urban community are traders and civil servants. The major

religions practised in the LGA are Islam and Christianity while some indigenes also practise traditional religion. Polygamy is more common in the local government than monogamy. There are several churches of different denominations and many mosques in the LGA. The LGA has several viewing centres that give the adolescents and young adults the opportunities for relaxation and access to watch foreign football matches.

The LGA is home to numerous markets the major ones being New Gbagi named Bola Ige, Erunmu, Manatan and Egbeda markets. Several companies have their base in the local government and this includes Nigerian Breweries, Coca-cola plant in Asejire, Sword Sweets, Dana Pharmaceutical Company and Bode Foam. Ibadan Airport is located within the LGA. There are other small scale industries located in the LGA like sawmills, furniture makers, fish farming, garri processing factories and palm oil processing factories.

3.4.2 Ido Local Government Area (Control)

The LGA has its head quarters at Ido along the Ibadan–Eruwa road. The LGA came into being in May 1989 when it was carved out of the former Akinyele Local Government Area. The LGA covers an area spanning the following major communities: Apata, Ijokodo, Omi-Adio, Akufo, Apete and Bakatari. Important villages such as Ogunwehinde, Dada, Oderemi, Odetola, Odufemi and Alagbaa are also sited within the local government. It shares boundaries with Ogun State in the south, Ibarapa East LGA in the west, Afijio LGA and Akinyele LGA in the north. In the east it shares boundaries with Ibadan North, Ibadan South-West and Oluyole LGAs. The LGA consists of ten wards.

The major occupation of the people is farming. They grow a variety of crops such as cocoa, kola nuts, palm-trees, oranges, pineapples, maize, cassava, banana and a wide range of other fruits. Ido LGA can be aptly referred to as one of the fruit baskets of the state. Parts of the LGA have some industries and other economic ventures such as the Nigerian Wire and Cable industries and Lafia Hotel. The LGA also enjoys the services of medium and small scale industries for the processing of agricultural produce such as cassava and cashew nuts.

Some of the major towns in the LGA are Apata, Ijokodo, Apete and Omi Adio. Most parts of the LGA lack pipe-borne water. There are three maternity centers in the LGA which are located in Ido, Akufo and Omi-Adio. The six dispensaries in the LGA are located at Ido, Omi-Adio, Apete, Akufo, Odetola and Kogue. Majority of the people depend on commuter services such as taxi cabs, commercial minibuses and motorcycles as means of internal transportation.

There is tremendous increase in the use of motorcycle for commercial purposes in the major towns and villages. Most roads are not tarred and therefore many of the villages are accessible only through motorcycles. There are many film houses located in the LGA that provide the adolescents and young ones the opportunities to exchange ideas and information.

There are three grade "C" customary courts in the LGA which are located in Akufo, Omi-Adio and Ido. There are 75 public primary schools and 24 secondary schools in Ido LGA. There are 92 registered private nursery and primary schools and eight registered secondary schools in the LGA. There are altogether 21 health centres in the LGA only four of which are however functional.

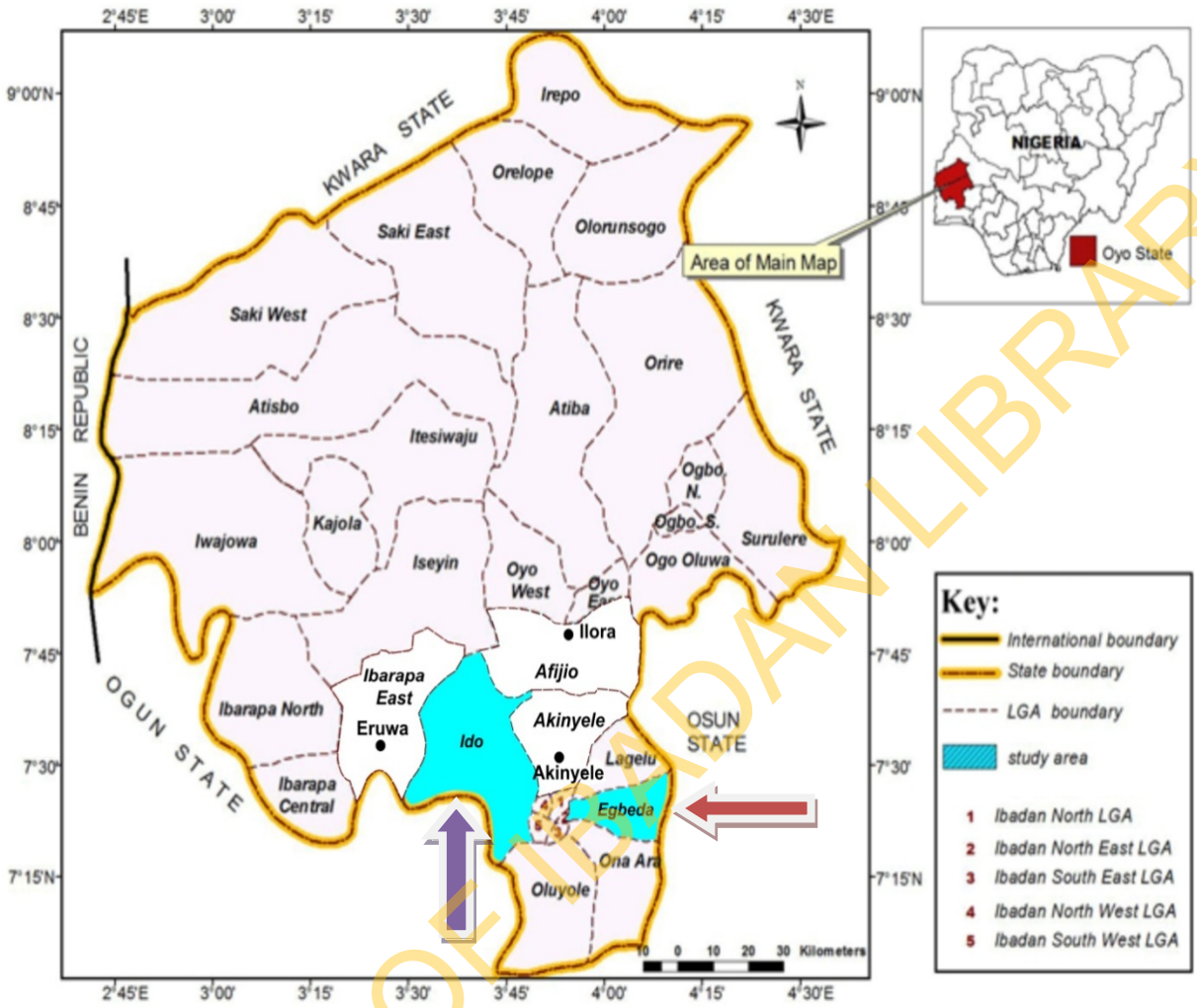


Figure 3.2: Oyo State Map Showing the Study LGAs

3.5 Study Population

The study population covered parents living with their adolescents (either male or female) aged 10-19 years The adolescents could either be apprentices or students but must still be living with their parents while the study lasted.

3.6 Sample Size Calculation

The sample size was calculated using a simplified form of comparison between two proportions given as:

$$n = \frac{(Z\alpha + Z\beta)^2 [P1(1-P1) + P2(1-P2)]}{(P1-P2)^2}$$ (Cochrane, 1953)

Where
n = Minimum sample Size
Z_α = 1.96 (95% level of confidence)
Z_β = 0.84 (80% power)
P_1 = 0.50 (Baseline Prevalence)
P_2 = 0.75 (Anticipated a 50% increase)

$$n = \frac{(1.96+0.84)^2 [0.5(1-0.5) + 0.75(1-0.75)]}{(0.5-0.75)^2}$$

$$n = \frac{(2.8)^2 (0.25 + 0.1875)}{(0.25)^2}$$

$n = 55$
$n \ \Omega \ 60$

For both LGA, a minimum of 120 parents and 120 adolescents were required for the study. However, the calculated sample size was increased to 200 parents and 200 adolescents to make provision for the improper completion of the questionnaire as well as the attrition that may occur at the follow-up (See Figure 3.2).

Table 3.2: Sample size in Study Arms

Study Groups	Categories		Total
	Parents	Adolescents	
EG	100	100	200
CG	100	100	200
TOTAL	**200**	**200**	**400**

3.7 Sampling Procedures

A three-stage sampling technique was used in selecting respondents for the study. The first stage involved listing of communities in Egbeda and Ido LGAs. In each of the LGA, five communities were randomly selected with the assumption that required sample size would be obtained. The houses/compounds in each of the selected communities were then enumerated. The second stage involved the systematic selection of the houses using the class interval. Simple balloting was adopted to select the starting point where the interviews took place.

Third stage involved the selection of the parents and their adolescents based on inclusion and exclusion criteria. The research was introduced to the participants and only those that met the inclusion criteria and were willing to participate were recruited. Efforts were made to enroll only adolescents that reported that they would be available throughout the course of the study. This was done as part of the screening procedure to only enroll those parents and their adolescents that would be available in the community for the entire duration of the study. Any parent that had adolescent male/female (in or out of school) aged 10-19 years were included in the study and interviewed. In cases where more than one parent was qualified for the study, one parent was selected by simple balloting from such house with the adolescents. To maintain gender balance, efforts were made to enroll equal number of males and females in the study.

3.8 Inclusion and Exclusion Criteria

3.8.1 Inclusion criteria

Inclusion criteria for this study were

1. A parent having an adolescent child (10-19 years) living with him/her in the same house;
2. Availability of parents and adolescents for the duration of study; and
3. Interest in participation in the study.

3.8.2 Exclusion criteria

These were

1. Parents that had adolescents who did not live with them in the same house;
2. Parents who did not indicate their interest in the study and the training; and
3. Parents or adolescents that indicated non-availability during the period of the research work.

3.9 Instruments of Data Collection

Both qualitative and quantitative methods were used for data collection; these were Focus Group Discussion (FGD) using FGD guide (See Appendixes 1a and b) and a pre-tested semi-structured questionnaire (See Appendixes II a and b). The FGD was used to validate the contents of the questionnaire. Twelve experienced research assistants (RAs) that made up of six males and six females were recruited and trained for data collection. Efforts were made to recruit RAs that had at least minimum academic qualification of National Certificate of Education.

3.9.1 Qualitative Data Instrument: Focus Group Discussion Guide

The FGD guide explored the reproductive health problems that were common among adolescents, sources of reproductive health information and factors that can inhibit or enhance parent-child communication. The discussion further sought suggestions from the participants on how parents can be empowered to initiate and discuss ARH with their adolescent children.

3.9.2 Quantitative Data Instrument: Questionnaire

The researcher used the findings from FGD as basis for the development of a semi-structured questionnaire (Appendixes IIa and IIb). Question items were also drawn from literature review and previous research projects (Izugbara, 2007; Akin-Otiko, 1998) relating to parent-child communication among the adolescents. The purpose of using a questionnaire was to collect data that would be used for testing the set of hypotheses. It also enabled the research student to compare the quantitative data at baseline and follow-up.

The questionnaire consisted of 108 open and close-ended question items, divided into five sections:

Section A: Demographic Characteristics - This was used to document the demographic characteristics of the respondents (parents and adolescents). These variables included the age, sex, religion, ethnic group, educational level and occupation of parents.

Section B: Knowledge of Adolescent Reproductive Health - The section contained questions relating to knowledge about various modes of transmission and prevention of

HIV/STIs. Knowledge about HIV /STIs prevention was assessed on thirty questions. The first seven (7) questions were based on ways of preventing pregnancy; eight (8) questions were on ways of avoiding STIs with true-or–false response; three (3) questions focused on mode of transmission of HIV/AIDS; three (3) questions focused on the potential risk associated with early pregnancy among adolescents and eight (8) question items focused on the physiological development of adolescents.

Section C: Patterns and Quality of Communication - The third section was used to assess the patterns and quality of communication between parent and adolescent, This was obtained through the responses to issues relating to patterns, frequency and quality of communication. Assessment of quality of communication was done with 15 question items that assessed clarity of message, responsiveness and comfortability of both parties during the discussion.

Section D: The Sources of ARH - The fourth section solicited information on the sources of ARH information to the adolescents.

Section E: Factors Inhibiting or Facilitating Parent-Child communication - This section formed the last section of the questionnaire which elicited information on the factors inhibiting or facilitating parent-child communication.

3.10 Methods of Data Collection

3.10.1 Focus Group Discussions

The participants for the FGD ranged from 8-10 for each of the FGD conducted. Convenient places like under trees and beside residential buildings where there are shades and fresh air, where there were no distractions within the community were places used for the conduct of the FGD. These places were those locations agreed upon by the participants. The FGDs were conducted first to get more insight into the research topics and the findings from the FGD were used to improve the quality of the draft questionnaire before finally used for data collection.

Before the commencement of the FGD, participants were told about the purpose of the research and were assured that their views would be used for the purpose of the research. They were assured of confidentiality of information provided. In order to protect their identities, participants were therefore told not to mention their names during the discussion. They were also informed that recording and note-taking during the FGD were necessary for the investigator to capture all the valuable information they would provide during the

discussion. In addition, they were informed that their participation in the discussion was voluntary and that they were free to withdraw at any stage if they so wished. The pre-tested FGD guide was used to facilitate the conduct of the FGDs (See Appendixes Ia and I) and discussants were encouraged to freely express their opinion. Different FGD sessions were conducted for parents and adolescents.

During the FGD, one of the research assistants served as recorder while the investigator or another experienced trained research assistant moderated the conduct of the FGD. The duration of the FGD ranged from 50 to 70 minutes with a mean of 60. The FGD sessions were audio-recorded and transcribed verbatim. These were word-processed and saved for analysis using Atlas.ti software.

Table 3.3 Number and grouping of Discussions

Group	Parents		Adolescents		Total
	Father	Mother	Male	Female	
EG	2	2	2	2	8
CG	2	2	2	2	8
Total	**4**	**4**	**4**	**4**	**16**

3.10.2 Questionnaire Administration

The quantitative data collection was mainly by use of questionnaire. The drafted questionnaire was modified with the finding from FGDs conducted. This was used in collecting the baseline and follow-up survey to ensure comparison of the changes in parent-child communication before and after intervention. The findings from both FGD and questionnaire were used to develop intervention.

3.11 Training of Research Assistants

A two-day training exercise was conducted for 12 experienced Research Assistant (RAs). The purpose of the training was to acquaint the RAs with the contents and the structure of the study instruments. The training came up on the 19th and 20th of January, 2013 at the Environmental Health Science classroom at Oladele Ajose building (Faculty of Public Health, College of Medicine, University of Ibadan). The training was conducted by the research

student with assistance of his colleagues in the Department of Promotion and Health (HPE). The training was supervised by a senior colleague in the Department of HPE to ensure that the RAs were adequately trained and to monitor the process.

The training started with the details of the study which included the goal and objectives, the target population, the importance of collecting accurate data and the use of both qualitative and quantitative instruments for the study, study sites and the responsibilities of RAs. Each instrument was discussed and explained thoroughly to ensure that RAs adequately understood it. The researcher discussed each question items in the questionnaire.

The motives behind each question items and objectives of the study were discussed. After the study instruments were fully explained to the RAs, two RAs were asked to role-play a qualitative session whereby one acted as moderator and the other as recorder while few of the RAs were asked to act like parents for the discussion. Other RAs and the trainers were asked to observe the exercise. Comments were made on what was observed during the role play exercise. For example, comments on what they did very well and what they needed to improve upon were discussed.

Another set of RAs were asked to role-play again for others to learn more from the exercise. This exercise was repeatedly done for both qualitative and quantitative instruments to allow full participation of all RAs. After the role play exercise, plans for data collection and logistics arrangements were discussed. Materials were given to the RAs in preparation for the fieldwork activities. Refreshment was served during the two-day training.

Potential challenges were raised and resolved by the research student. For example it was agreed that the ideal time to find parents and adolescents at home was between 3 and 6 pm. It was therefore agreed that appropriate time for data collection should be in the evening 3.00-6.00 pm when most of the community members might have been at home with their wards. It was agreed that the RAs should be at the designated places in the community by 12:00 noon each day of data collection. The researcher and some of the RAs set out for field familiarisation tour a day after the training exercise.

3.12 Study Variables

Relevant independent and dependent variables were measured during the study. These are presented below.

3.12.1 Dependent variable

The dependent variable for this study was the exposure to intervention.

3.12.2 Independent variables

The independent variables were derived from the major conceptual framework adapted for the study. These variables include:

1. Knowledge of adolescent reproductive health before and after intervention;
2. Intention to initiate discussion about ARH with the parents/children;
3. Frequency and quality of communication between parents and adolescents on reproductive health before and after intervention;
4. Practice of discussing ARH issues between parents and their adolescent children which is a result of the intervention; and
5. Major ARH issues discussed between parents and adolescents.

These variables, used to formulate the hypotheses, were explored at baseline and follow-up surveys.

Therefore, the following indicators were used to measure the effects of the intervention:

1. Knowledge about ARH issue;
2. Initiation and frequency of communication on ARH issue;
3. Quality of communication on ARH provided by parents;
4. Parents' intention to initiate communication on ARH issue; and
5. Sexual practice and behaviour of the adolescents

3.13 Validity and Reliability of Instruments

3.13.1 Validity of the Instruments

The instruments were drawn up based on the extensive literature review and findings from FGD in consultation with the researcher's supervisor. Further, the development of the questionnaire items was structured based on the objectives identified for the study and guided by the conceptual framework of the PRECEDE model (Green and Kreuter, 2005). Face validity was determined by presenting the drafted instruments to the staff in the Department of Health Promotion and Education and Department of Language and Communication Art, University of Ibadan for comments/contributions. Their comments/contributions were used to

improve the face and content validity of the instrument. The instruments were first developed in English and later translated into Yoruba which is the language spoken in the study areas. The translated instruments were also given to another expert to back-translate into English to validate its correctness.

The instruments were pre-tested in Moniya community (Akinyele, a LGA in Oyo state) that has similar characteristics with the study LGAs. During the pre-testing of the instruments, corrections and revisions suggested by the RAs were integrated. The revision included the needs of adolescents according to their sex; probing into issues fathers and mothers usually discussed with their adolescent children and not limiting it to parents among others. Also included in the corrected version of the questionnaire are category/occupation of the respondent, class of respondents (for in-school adolescents) and educational level for out-of-school adolescents. This modification enhanced the content validity of the instrument. The internal consistency was ensured as the age of the participants was within the range of adolescents (10-19 years) and their parents.

3.13.2 Reliability of the Instruments

The following actions were taken to ensure the reliability of the instruments was tested: both the qualitative (FGD) and quantitative (Questionnaire) were pre-tested in Moniya, Akinyele LGA. The questionnaire was pre-tested for reliability test on 10% of the sample size making a total number of 23 parents and their adolescent children. The responses were reviewed, coded, entered and analyzed using SPSS software. The reliability of the questionnaire was analyzed using Cronbach's Alpha statistics. Reliability test was conducted and it gave an alpha value of 0.830 for parents' instrument and 0.810 for the adolescents' questionnaire.

Table 3.4 Reliability of coefficient of each Section of the Questionnaire

Sections	Parents Instrument	Adolescent Instrument
Section A	0.745	0.797
Section B	0.842	0.795
Section C	0.770	0.703
Section D	0.803	0.735
Section E	0.714	0.802
Overall Reliability	**0.832**	**0.810**

3.14 Procedure for Data Collection

Before the commencement of the study, the community leaders were visited and informed on the purpose of the research. Informed consent was also obtained from the participants before they were enrolled into the study.

3.14.1 Conduct of FGD for Baseline

Since there were two groups participating in the study - parents and adolescents - a total of sixteen FGD sessions were conducted, consisting of four FGD sessions for adolescents in each experimental and control groups and four FGD sessions for parents in each of the groups (See Table 3.3). Each session was homogenous and had between eight (8) and ten (10) participants per group. Four experienced research assistants were trained and then assigned to be moderators and note-takers for the discussions. The moderators had similar characteristics with the FGD participants to ensure free flow of discussion. The research student was present at every session to coordinate and monitor the process. Adequate provision was made for successful sessions by making the environment conducive and serving refreshment during sessions.

Each of the sessions started with general introduction of members and the purpose of the discussion. Each FGD session lasted for 50-70 minutes on average. The discussions were audio-recorded and later transcribed verbatim. At the end of each session, the research student thanked the participants for their support and cooperation for successful discussion. A small gift of detergent was provided to each of the participants for the time and contribution in addition to the refreshment provided. The FGD sessions were audio-recorded after full consent of the participants had been taken.

3.14.2 Questionnaire Administration for Baseline Survey

After the pre-testing of the questionnaire, the revised version of the instruments was administered on the parents and their adolescent children (10-19 years) in the two study sites to obtain the baseline information. This exercise commenced in January 2013 and it lasted for three weeks. The RAs were paired and assigned different areas in the community. The interview exercise started with the experimental study community. The RAs went from house to house to administer the questionnaire using face-to-face interview. The questions were read out to respondents and explanations were provided whenever it was necessary. The interviews were conducted in Yoruba language being the major language spoken by the

majority of the people in the community for both the parents and adolescents. Very few interviews (2%) were conducted in either Pigin or English for respondents that did not understand Yoruba. On the average, each RA administered between five and six copies of the questionnaire daily. Data collection was supervised by the research student in conjunction with one field supervisor who also served as a local guide.

3.15 Data Management and Analysis

The qualitative data were recorded on audiotapes and later transcribed for analysis using Atlas.Ti software programme. Key themes relating to knowledge about adolescent reproductive health, source of adolescent reproductive information and barriers to parent-child communication were developed and were used to fine-tune the questionnaire. The findings were presented in themes and quotations.

Survey questionnaire copies were checked on the field for completeness and accuracy. A serial number was assigned to each copy of the administered questionnaire copy for easy reference and identification. Coding guide was developed from the questionnaire and the open-ended sections were coded and fed into the computer. Prior to data entry, questionnaire copies were reviewed and edited for random and systematic error and possible corrections were made in consultation with the interviewers. A logic check was developed to minimize data entry errors. SPSS package was used for survey data entry. Since data were collected at two points in time, baseline and follow-up, they were analyzed at two different times.

The quantitative data were analysed using descriptive, Chi-square (X^2) and Student t-test statistic. Descriptive statistics were used to analyse the socio-demographic characteristics of the respondents using mean, standard deviation, and percentages. The categorical data generated at the pre- and post-test for the EG and CG were analyzed with Chi-square and comparison of mean was analyzed with student t-test at $p<0.05$. The data were analyzed according to variables and scores were graded as follows:

- Pre-intervention comparison of the EG and CG's mean knowledge, frequency and quality of ARH communication scores using Student t-test;
- Pre- and post-intervention comparisons of the EG's mean knowledge, frequency and quality of ARH communication scores using Student t-test;
- Pre- and post-intervention comparisons of the CG's mean knowledge, frequency and quality of ARH communication scores using Student t-test; and

- Post-intervention comparison of the EG and CG's mean knowledge, frequency and quality of ARH communication scores using Student t-test.

3.15.1 Knowledge of ARH issues

Knowledge about ARH issues was assessed on thirty question items. The first 11 questions were based on ways of preventing pregnancy in adolescence followed by ten (10) questions on mode of transmission of STIs including HIV/AIDS from one person to the other. The remaining nine (9) questions were on the psychological development of the adolescents. Each question was in form of multiple choice or list and the respondents were requested to select one correct answer from the three options: "True", "False" or "I don't know". The knowledge questions were assigned a score of one point for every correct answer and 0-point for every wrong answer; making up a 30-point knowledge scale with scores ≥20 regarded as good knowledge, scores between 10≤19 were regarded as fair knowledge and ≤10 regarded as low knowledge (Section B of appendixes II and III).

3.15.2 Perceived Quality of communication

The perceived quality of communication was rated on a scale of 15 point. The first five (5) questions were on the clarity of message followed by five (5) questions on responsive during the discussion and lastly five (5) questions on perceived comfort during the discussion. Each question was in form of multiple choice and the respondents were requested to tick either Yes or No. Also each correct answer had a score of one point, leading to a total of 15-point quality of communication scale. Descriptive analysis and Chi-square test were adopted for the analysis of frequency of communication and sexual practices.

3.16 Components of Study

The research project was implemented in three phases: Baseline, Intervention and Follow-up.

3.16.1 Baseline Phase

Baseline activities involved mapping out the communities, enumeration of the house in the study communities, selection of respondents and administration of the questionnaire, the process of which has been described earlier.

3.16.2 Description of Intervention

Selection of the intervention and control groups was determined mainly by simple random sampling method. Only parents were targeted for the intervention. From the result of the baseline, training workshop was recommended by both the parents and their adolescents as most suitable to increase parent-child communication on ARH. Three batches of training workshops were conducted for selected parents. The goal of the training was to equip the parents with ARH knowledge, the importance of parent-adolescent communication on ARH matter and factors that can promote or inhibit parent-child communication.

Inclusions criteria for the training workshop include;

1. Parents' participation in the baseline data collection;
2. Parents that can be contacted by telephone with phone numbers given during the data collection;
3. Express interest in the study; and
4. Commitment to being available throughout the duration of the study.

3.16.3 Pre-training meetings

The researcher conducted two pre-training meetings with prospective trainees. The purpose of these pre-training meetings was to validate the level of interest and commitment of the parents and to seek for their participation on the proposed training workshop. The first pre-training meeting was held on the 15th of August 2013 at Primary Health Care Facility, Egbeda while the second one was held at the same venue on the 22nd of the same month. During the first contact, only 17 participants attended the meeting. This poor turn-out called for the second meeting in order to mobilise more people for the meeting. The second meeting was attended by 33 participants who made meaningful contributions to the discussion. During these meetings, the following were agreed upon: day of training; duration of training and venue of training. It was also agreed that:

1. A day before and the market days should be avoided for any of the training activities;
2. Two-three hours of training was enough for them because of their businesses;
3. A five-member training committee was set up with members from different locations in the community whose roles are to assist in planning logistics and mobilise others for the training (See Appendix IX-Picture 3);
4. The members agreed that the training should be held at the Christ Assembly Hall where the community usually held its meetings;

5. The participants wanted the training to commence immediately the next day (Monday 26th of August, 2013, because of their perceived benefits and interest) for the first batch with those that attended the second meeting while others that came later should be slated for second batch;
6. A dedicated phone number was given to the participants so that they could call to request or ask for any clarification on any issues; and
7. The committee met at the end of the general meeting and the following were agreed upon:
    a. A list of potential parents that participated in the baseline survey so as to locate and inform them of the training;
    b. Payment for their transportation should be done on the last day of the training;
    c. Issuance of certificate to the participants at the end of the training; and
    d. Promise to visit the community again on Saturday 24th August, 2013 to finalise the preparation.

All these recommendations were strictly adhered to by the research student.

3.17 Development of Training Curriculum

The curriculum was developed using the findings from baseline survey. The Curriculum for National Reproductive Health, HIV/AIDS Prevention and Care Project through NYSC and Outreach Guides and Picture Codes Manual produced by Pact Botswana were adapted, modified and used for the training of parents in the EG. The topics were adopted from the training manual and included in the developed curriculum (Appendix III) by the researcher.

The content areas covered during the training are listed below:

1. STIs and HIV/AIDS;
2. Prevention of unwanted pregnancy and Abortion;
3. Communication and listening skills;
4. Factors inhibiting/promoting communication between parents and adolescents;
5. Expected roles of the parents in Adolescent Reproductive Health;
6. Design of work plan for Follow up activities; and
7. Introduction to the use of Management Information System (MIS) forms.

3.18 Training Intervention

Knowledge of these parents on ARH was upgraded through 3-day training workshop organised in three batches. Pre- and post-evaluation of the training exercise were conducted to assess immediate outcome of the training workshop. The workshop was carried out at Christ Assembly Hall, Irewunmi Estate, Egbeda - a venue agreed suitable for the parents during the pre-training meetings.

During the training, both fathers and mothers were empowered on how to initiate discussion on ARH issues and the importance of parent-adolescent communication. The parents were charged with the responsibility of talking to their adolescent children and the importance of doing so.

Three batches of training were conducted for the parents. The first batch of the training exercise took place on the 3rd, 4th and 7th of September, 2013 at the agreed venue - Christ Embassy Hall, Egbeda - between the hours of 10.am and 1.00 pm each day. The date and time was set based on the consensus reached during the pre-training meeting with the potential participants and planning committee that the training should not exceed three hours each day and the day before and market days should be set free. A list of all parents that were interviewed during the baseline were printed out and copies were given to the members of the planning committee.

The participants were mobilised by the planning committee in conjunction with the research student through phone call and personal contacts. Forty parents were mobilised for the first batch. This number was targeted because the research student was advised that some might not be willing to attend until when they heard about its benefits from others who had participated.

Four experienced resource persons assisted the research student in the conduct of the training. They were experts from Fertility Research Unit, Department of Obstetrics and Gyneacology, College of Medicine, University of Ibadan; Communication expert from Department of Language and Communication Art, University of Ibadan; and Health Promoter/adult trainers from the Department of Health Promotion and Education, College of Medicine, University of Ibadan, Ibadan.

On the first day of the training, there was a pre-test evaluation activity to document the knowledge of the trainees based on what the training focused on and was repeated at the last day of the training to document if the trainees actually acquired any knowledge during the training. The research student explained the purpose of the training workshop to the trainees and after that made presentation of the result of the baseline survey. Several questions were asked by the participants and these were adequately answered by the research student. After a short break, the reproductive health expert had her presentation on the overview of STI/HIV/AIDS among adolescents: roles of parents in STIs prevention and control among adolescents. The training employed participatory approach and real life experiences were shared among members.

At the end of the presentation, questions were asked and responded to accordingly by the presenter, research student and trainees. During the short break, part of a film titled "*Ayegbege*" produced by Association for Reproductive Health was shown to the trainees. The film showed ways of contracting and preventing HIV/AIDS. Throughout the training session, participatory approach was adopted for the presentation. At the end of the day, the research student briefly summarised the activities for the day and advised trainees to come early on the second day to start early. Lunch was packed for each of the participants. The presentations were done in Yoruba language as majority of participants were Yoruba and are convenient with Yoruba Language which guarantee and ensure their understanding.

On the second day of the training, the research student asked the trainees one after the other to recap the activities for the day one. He then summarised all the points discussed. This exercise served as a revision for the day one activities for those that had one issue or the other bothering their mind concerning day one. The communication expert presented his own lecture on "communication factors inhibiting/promoting communication between parents and adolescents". The presentation ended with questions, comments and observations. Personal experiences were shared and several case scenarios were presented by the trainees and ways to address such were addressed by the presenter and research student (See Appendix IX for training photographs).

The trainees were grouped into three and different case studies were given to the group to discuss for 15 minutes under the directive of facilitators. After the discussion, each group was asked to present how to address various issues given to them and others made their own

comments, suggestions and inputs. These activities were carried out till the end of the day and the lunch was also packed for the trainees. Day three activities started with the recap of day one and day two training activities by the research student. Participatory method was adopted whereby the trainees were asked to list what were discussed during previous days. Immediately after the recap, health promoter/adult trainer presented the "expected roles of the parents in Adolescent Reproductive Health".

After her presentation, the plans for the follow-up activities were discussed by the research student. The training came to an end with a post-training evaluation. Certificate of participation (Appendix IV) and transport allowance for the three days were provided for each of the respondents. Several remarks were made by the participants and closing prayer was said by one of the participants. Lunch was also packed for all the participants (See the appendix IV for the training programme). Thirty-two (32) parents were trained during the first batch.

The same methods was adopted for the second and third batches that took place on 16th, 17th, 20th and 23rd, 24th, 27th of September, 2013 respectively. Twenty seven and sixteen parents were trained during the second and third batch respectively. A total of 75 parents were trained and they were monitored/followed up for the period of six months through monthly meeting and supervisory visits. All the presentations were provided to the participants and group photograph was taken at the end of each day. The pre knowledge score of the trained parents was 23.6±6.2 while the post training knowledge score was 29.1±3.8.

3.19 Development of Monitoring Information (MIS) Form as monitoring tool

An MIS form was developed as a monitoring tool for the activities of the parents during the period of intervention. This was necessary to actually determine the specific issues discussed the number of time each issue was discussed and the issues most discussed with the adolescent during the intervention period. Major themes of the training which included pregnancy prevention, HIV/AIDS prevention, STI prevention and career development were used to develop Monitoring Information form. Based on the demographic information of the trained parents, the form was designed to have different pictures to depict these themes and space provided to tally. Appropriate images were searched for on the internet.

The form was designed to be filled by the parents through tally (See appendix V). This was decided upon by the research student because majority of the parents trained could not read and write. This MIS form was pre-tested among group of trained parents before the final printing was done. This was done by presenting the draft of the MIS form to parents and asking for their understanding and interpretation of the message presented on the tool. The parents asked for the meaning of HIV symbol which was explained to them as a standard symbol used to depict HIV/AIDS. Observation, comments and input of the parents were incorporated accordingly before mass production of the form. The form was given to the trained parents and collected on weekly basis. The identifier of the person that filled the form was documented for collation and the tally was calculated at the end of the implementation stage.

After six (6) months post-intervention, a follow-up survey was conducted among both the adolescents and their parents to evaluate the effects of the intervention on knowledge, frequency and quality of ARH communication. A similar questionnaire used during the baseline data collection was administered at the follow up for data collection after a brief modification.

3.19.1 Implementation of Intervention by Parents

The follow up activities of the parents and how the activities would be implemented were agreed upon during the training programme. It was generally agreed upon that the discussion should come up at any convenient time for both the parents and their adolescent children mostly after day's work; weekends or in the evenings. These activities that were expected of the parents were evaluated at follow-up involved the following:

- Establish good parent-child relationship;
- Initiate ARH discussion with their adolescent children;
- Discuss the following issues in an age appropriate manner:
    i. Adolescent and HIV-AIDS,
    ii. Mode of HIV Transmission and Prevention,
    iii. Ways and importance of abstinence, and
    iv. Ways of Preventing pregnancy; and
- Bi-weekly group meeting with the research student.

The bi-weekly group meeting did not worked out as planned because the trained parents did not turn up due to perceived busy schedule, forgetfulness of the time of the meeting and

exorbitant cost of transportation to the agreed venue. The researcher applied his initiatives and embarked on weekly individual visitation during which he distributed and collected the MIS form from the parents.

3.19.2 Monitoring of Intervention

The intervention activities were monitored through monthly meetings with the trained mothers and fathers, phone calls, text message reminders and occasional visit to the parents. MIS form developed was given to all trained parents to document their activities (See Appendix V). The forms contained the name of the respondents (parents), sex of the index child, month, week, and issues discussed. This served as a means of monitoring and tracking the progress of the intervention.

3.19.3 Post-Intervention Data Collection Using Questionnaire

The same methodology of questionnaire administration that was used during baseline survey was employed at post-intervention follow-up. The same set of participants at baseline was contacted. However some questions which sought information from the parents about their experience on the intervention were added to the baseline questionnaire for follow-up survey. The same questionnaire administered on the EG was also administered on the CG to determine if the educational intervention had significant impact on the EG.

3.20 Limitations of the Study

1. Participants were highly mobile. Some had relocated to another town due to cholera outbreak in Egbeda which was the intervention area. They were tracked through phone calls, contact tracing and snowball approach. Eighteen (24%) of the trained parents were lost to follow-up.
2. Few MIS forms (6) that were not properly filled were discarded and not included in the result.
3. The data about sexual behaviour were self-reported. As a result, under-reporting of sexual activities might have occurred among the adolescent population. However, to ensure the adolescents provided reliable information about their sexual activities, the questionnaire was designed to be anonymous and respondents were assured of confidentiality of data.
4. Scarce financial resource was a limitation; parents in control group were provided with leaflet on personal hygiene.

5. There were some significant demographic differences among the studied communities which imply that they are not comparable at baseline. This is a common problem in any quasi-experimental research. Though, the communities have some similar characteristics and some differences. The implication is that respondents were not on the same level at the baseline. This is one of the limitations of the quasi-experimental design study. The research student attempt to apply the regression analysis to control for the differences in the baseline Socio-demographic characteristics, but this could not be achieved due to the fact that the expected frequency count in most of the cells is <5. Hence convergence could not be attained.

3.21 Ethical Considerations

The following steps were taken to address the ethical issues involved in this study:

1. The proposal was reviewed and approved by Oyo state Ministry of Health Ethics Review Committee, Agodi Secretariat Ibadan (Appendix VIII for letter of approval).
2. Verbal informed consent was obtained from each research participants.
3. To encourage disclosure, respondents and interviewers were matched by sex, carefully selected and trained interviewers and pilot tested both instruments for data collection and interviewer's skills.
4. All information provided by research participants was kept secret and confidentiality of the identity was maintained. To this end, names were not required on the questionnaire. In addition, the completed questionnaire copies were kept in secured containers where no one other than the research student has access to. Respondents were informed about plans for maintaining confidentiality as part of the informed consent process.
5. Intervention activities were not carried out in the control communities because of financial scarcity but they were only provided with leaflet relating to personal hygiene. There is an ongoing plan to conduct similar training in control.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the results of the findings from the Focus Group Discussion conducted among both the parents and adolescent and finding from the baseline and follow-up surveys. The changes that occurred as a result of intervention activities on the EG and CG which was not exposed to any intervention were also presented. Also presented are changes found with each group before and after intervention including the results of the hypotheses. The third and last section described the results of the relative effectiveness of intervention approach.

4.1 Findings from the Focus Group Discussion (FGD)

4.1.1 Reported Common Health Problems Affecting Adolescents

Several health problems affecting adolescents were identified by both the parents and adolescent during the discussions. Among the cases of sexually transmitted infections included gonorrhea, unwanted pregnancy, which at times resulted into abortion according to them:

> *"The problem of sexually transmitted infection like HIV and gonorrhoea are common among the female. They engage themselves in prostitution to get money" (EG Male Adolescent).*

> *"Some people that engage in prostitution because there is no money and from that people can contract HIV" (CG Male Adolescent).*

Parents also confirmed that unwanted pregnancy, abortion, joining of bad group, STI like gonorrhoeal are common among adolescents. According to them the following were the responses of the parents:

> *"Sexual intercourse can lead to unwanted pregnancy. They will not want their parent to know so from there they can use drugs for abortion which can result in death or another health problem in their body" (CG Mother Participant).*

> *"The common sexually transmitted disease among adolescents in this community includes gonnorhoeal" (EG Father Participant)*

"It is the abortion which is very bad but if they didn't join bad group they might not behave like that" (CG Mother Participant).

"Also, some infection aside HIV like gonorrhoea, toilet disease. This toilet disease can be contracted" (CG Mother Participant).

"At times they can get it through seminar. -When they call youth for seminar. Also, in school, they can hear it from school"(CG Mother Participant).

"At times, it may be through their friends because there are some things they will not want to discuss with parent" (CG Mother Participant).

"Some boys involve or love to drink alcohol, beverages and it always lead to broken homes and to them they are enjoying life. They involve in taking Indian hemp, cocaine, beers of all stuffs" (EG Father Participant).

4.1.2 Sources of ARH Information

Several sources by which adolescent get information were mentioned during the discussion. These included radio and television, magazines/newspaper, from peers, clergymen, elderly person including parents and from seminars. Some of the typical statements are shown below:

"Adolescent in this community gets information about health matters generally from radio and newspapers" (EG Male Adolescent)

"Adolescent gets information relating to health from magazines or parents" (EG Male Adolescent).

"Adolescent gets information relating to health at times from friends" (EG Male Adolescent)

"Television, there are some that we read in newspapers and they place it on internet" (CG Female Adolescent)

"Adolescents get information relating to health from pastors, everlasting and elderly persons" (EG Male Adolescent).

"Information about sexually transmitted infections are obtain from television and attending conferences holding discussion on such issues e.g. in places D-rovan hotel where seminar was held on HIV. Also movies on television can be used to disseminate message on this topic/issue" (EG Male Adolescent).

"And also the film we watch always teach us lessons" (CG Female Adolescent).

According to the parents' participants, adolescent get information from various sources which included seminar, their peers from their schools and workshops and churches. It was also noted that some parents will not like discussing issue of ARH with their adolescent but rather requested someone the adolescent respect to assist in discussing such an issue with him or her. The following are the typical statements made by the parent's participants:

"They can get it through seminar. When they call the youths for seminar. Also, in school, they can hear it from school" (CG Mother Participant).

"It may be through their friends because there are some things they will not want to discuss with parent" (CG Mother Participant).

"Adolescents get information on the issues of health matters generally at the relaxation centres, when they converge at a spot to watch football in the community mostly and not necessarily from radio or parents" (EG Father participant).

"It is a mother that can talk to her daughter because a daughter belongs to her mother, while the male child belongs to his father. Also, male child cannot talk to his father the same way he will talk to his mother. The man can only refer the male child to the mother when his talk is not clear enough to him" (EG Mother participant).

"From the church, the adolescents acquired a lot of information about their health from the church" (EG Mother participant).

"Parent also make use of people to interfere in giving counsel to their adolescent especially people the adolescent fear or have respect for" (EG Father participant).

4.1.3 Factors Motivating Parent-Child Communication (PCC)

Time is one of the motivating factor the promote parent child communication and existence of cordial relationship between parents and their adolescent are the key promoting factors. The behaviour of the adolescent will also motivate the parents to discuss ARH with the adolescent. According to them:

> *"If there is time for parent to discuss with their children" (EG Female Adolescent).*

> *"If the government can help to improve the cordial relationship between parent and their child, the love will be there to help them discuss. Because some parents and their child are sleeping under the same roof and there is no love between them. So if there is cordial relationship it is easy" (EG Female Adolescent).*

> *"What can prompt mother is if for example, it is a girl, if she use to help her mother in the kitchen, even from there they can start discussing" (CG Male Adolescent).*

> *"If the child is well-behaved, then mother can discuss with him/her and also pray for them" (CG Male Adolescent).*

> *"If it is a child that yields to correction not the one that is always angry when corrected" (CG Male Adolescent).*

4.1.4 Barriers to the PCC

Four major barriers were mentioned that can hinder PCC on ARH. According to the adolescent, parents that engage in extra marital affairs, disobedient behaviour of adolescent, living separately, parents having negative lifestyle e.g. drinking too much of alcohol and loses his /her senses. The following were their responses:

> *"When mothers keep extra marital affairs to the extent that man friend makes love to her in her matrimonial home or shop, this will inhibit her from discussing issues related with sexual, pregnancy prevention and abortion with her daughter" (CG Male Adolescent).*

> *"When mothers deliberately send daughters to male friends in order to procure cash for the family or by collecting gift on her behalf" (EG Father Participant).*

"Disobediently and way ward, way of life can serve as barriers to discussing this issue with adolescent because parent will pressure such discussion is wasting of time since the child will not act on it" (CG Male Adolescent group).

"When adolescent children are not living with their biological father or mother, this can serve as a barrier in discussing such issue" (CG Male Adolescent group).

"When parent are involved in bad attitudes like smoking of cigarette and taking of alcohol like regal gin, implementing order on issues related to sexual ,pregnancy prevention and abortion will be difficult for them among their adolescent children" (CG Male Adolescent group).

"When parent after being drunk from alcohol lose sense of reasoning and makes love anyhow not minding the presence of an adolescent child and even end up beating themselves in the process, they find it difficult to discuss issues relating to sex, pregnancy prevention and abortion with their adolescent children" (CG Male Adolescent).

"If the mother is not faithful in the marriage, if she is sending either the daughter or son to concubine, having extra marital affairs which is known to the children can inhibit such discussion. Also when mothers use their daughter as means of generating money from rich men, this will inhibit her from discussing reproductive health issues with her daughter freely" (EG Father Participant).

"When the father could not fend for the family and is using the children especially the female to generate fund for the home upkeep. Some fathers encourage their children to generate more cash for his household" (EG Father Participant).

It was suggested by adolescent participants that parents should allow their children go of their environment to know what is going on outside, they should not be limiting their children to the school and the home alone. It was agreed that the parents should allow their adolescents go out to appreciate what is going on in their environment. It was also pointed out that some parents don't know how to communicate with his/her children on the issues being discussed while some are still looking at their children as small boy or girl whereas things have change from the past. Also noted was that the parents should not discuss issue relating to their children with any other person in the family or community. The responses were:

"Some parents don't know how to communicate with his/her children on the issues being discussed since morning" (EG Male Adolescent).

"Some parents are looking at their children as small boys and girls and the situations are not like that nowadays they need to be trained on how to handle, advice and train their children for a better tomorrow" (EG Male Adolescent).

"They need to be trained and re-trained in the aspect because as some parents are commonise their children, they will be saying when were you born" (EG Male Adolescent).

"They should tell our parents not to be discussing our issues with other people or outsider because the outsiders don't know what is happening. They will advise them wrongly, they will just say is this how he/she behaves and punish such child so they should help us talk to them" (ID Female Adolescent).

According to the some parents participants

"I don't think there is anything that can prevent parents from discussing with their children unless that parent is not responsible. It is imperative for parent to have time for discussion with their children. There was a film I watched of one rich parent, they didn't have time to educate their daughter. They are always looking for money. Anytime the child wants to ask question, they will not allow her to speak, they always thought she needs money and they will give. So the child had to go outside and seek for advice. Unfortunately, she was advised wrongly and ended up walking the wrong paths. So, everything is not money" (CG Mother Participants)

4.2 Data from Questionnaire Administration

4.2.1 Baseline Characteristics of respondents

4.2.1.1 Socio-demographic Information of adolescent and parents respondents

A total of 109 and 106 parents and adolescent pair were interviewed at baseline in EG and CG respectively. More than half of the adolescent respondents in both EG and CG are between the ages of 10-14 years with mean age of 13.9±2.4 in both study groups. Large majority 90.8% and 94.3% of the adolescent respondents in EG and CG were in-school respectively and 94.5% and 88.7% are Yoruba ethnic group in EG and CG respectively. Christianity is most practiced religion among 66.1% and 55.7% study participants in both EG and CG respectively. Chi-square analysis revealed that there was no significant difference for most of the socio-demographic characteristics of the EG and the CG. Details of the socio-demographic characteristics of the experimental and control groups are presented in table 4.1a.

A total of 215 parents were interviewed at the baseline. The age of the respondents' parents in EG was 41.5±7.0, while that of the CG was 42.6±8.5 and majority of the parents in EG (44.0%) are within the age bracket 30-39 years while in the CG 43.4% are within the age bracket 40-49 years. Many of them were mothers, 79.8% and 83.0% in EG and CG respectively. Larger proportion of the respondents were Yoruba ethnic group in both EG (96.3%) and CG (86.8). In both EG and CG Christian religion was largely practiced by respondents (55.1% EG; 55.7% CG Chi-square analysis revealed that there was no significant difference for most of the socio-demographic characteristics of the EG and the CG. Comparison of the age and religion of adolescents indicated that there were difference between EG and CG at baseline (Table 4.1b). Details of the socio-demographic characteristics of the parents in EG and CG are presented in Table 4.2. All the missing values have been excluded from the calculation.

Table 4.1a: Baseline Socio-demographic Characteristics of Adolescents (N=215)

Demographic Characteristics	Baseline (N=215)		χ^2	P-value
	EG (n=109) No (%)	CG (n=106) No (%)		
Age as in years*				
10-14	62(56.9)	65(61.3)	0.438	0.579
15-19	47(43.1)	41(38.7)		
Mean age	**13.9±2.4**	**13.9±2.4**		
Sex			4.515	0.041
Male	60 (55.0)	43 (40.6)		
Female	49 (45.0)	63 (59.4)		
Status				
In-school	99 (90.8)	100 (94.3)	0.963	0.437
Out-of-school	10 (9.2)	6 (5.7)		
Ethnic group				
Yoruba	103 (94.5)	94 (88.7)	2.36	0.124
Non-Yoruba**	6 (5.5)	12 (12.3)		
Religion				
Christianity	72 (66.1)	61 (57.5)	1.649	0.209
Islam	37 (33.9)	45 (42.5)		

***Overall Mean age= 13.9± 2.4**

****Non-Yoruba includes Hausa, Igbo, Igede and Cotonou**

Table 4.1b Comparison of adolescents' age and religion by sex at Baseline

Demographic Characteristics	Baseline					
	Male (n=103)			Female (n=112)		
	EG (%)	CG (%)	P-value	EG (%)	CG (%)	P-value
Age as in years						
10-14	38(63.3)	28(65.1)	0.174	24(49.0)	37(58.7)	0.304
15-19	22(36.6)	15(38.9)		25(51.0)	26(41.3)	
Religion						
Christian	42(72.4)	29(67.4)	0.292	30(61.2)	32(50.8)	0.271
Islam	16(27.6)	14(32.6)		19(38.8)	31(49.2)	

All P-value are not significant

Table 4.2: Baseline Socio-demographic characteristics of the Parents (N=215)

Demographic Characteristics	Baseline (N=215) EG (n=109) No (%)	CG (n=106) No (%)	χ^2	P-Value
Age as in years*				
30 – 39	48 (44.0)	40 (37.7)	8.03	0.045
40 – 49	41 (37.6)	46 (43.4)		
50 – 59	20 (18.3)	14 (13.2)		
60 – 69	0 (0.0)	6 (5.7)		
Mean Age	**41.5±7.0**	**42.6±8.5**		
Status				
Father	22(20.2)	18 (17.0)	0.34	0.36
Mother	87(79.8)	88 (83.0)		
Ethnic group				
Yoruba	105 (96.3)	92 (98.9)	1.39	0.236
Non Yoruba*	4 (3.7)	1 (1.1)		
Religion				
Christianity	72 (66.1)	59 (55.7)	2.43	0.118
Islam	37 (33.3)	47 (44.3)		

***Non-Yoruba includes Hausa, Ibo, Igede and Togolese**

Table 4.3: Parents' Level of Education of Adolescents N=215

Educational Levels	Father (N=215)				Mother (N=215)			
	EG (n=109) No (%)	CG (n=106) No (%)	χ^2	P-value	EG (n=109) No (%)	CG (n=106) No (%)	χ^2	P-value
No formal education	13(11.9)	6(5.7)	6.555	0.161	9(8.3)	7(6.6)	6.875	0.597
Primary education	25(22.9)	19(17.9)			29(26.6)	19(17.9)		
Secondary education	49(45.0)	62(58.5)			55(50.5)	61(57.5)		
Vocational	1(0.9)	3(28)			1(0.9)	1(0.9)		
Tertiary education	21(19.3)	16(15.1)			15(13.8)	18(17)		
NCE	2(9.8)	0(0.0)			6(18.2)	5(15.2)		
OND	3(14.3)	1(6.3)			3(9.1)	2(6.1)		
HND	5(23.8)	3(18.8)			2(6.1)	5(18.2)		
University	11(52.4)	12(75)			4(12.1)	6(54.5)		

Table 4.4: Occupation of the Parents of Adolescents N=215

Occupation of the parents	Baseline (N=215)			
	EG (n=109) No (%)	CG (n=106) No (%)	χ^2	P-value
Father's Occupation				
Civil servant	19(17.4)	19(17.9)		
Trading	26(23.9)	25(23.6)		
Artisan	33(30.3)	32(30.2)		
Professional	9(8.3)	13(12.3)		
Driving	8(7.3)	12(11.3)	10.341	0.324
Clergy	7(6.4)	4(3.8)		
Accountant	5(4.6)	0(0.0)		
Others*	2(1.8)	1(0.9)		
Mother's Occupation				
Civil servant	12(11.0)	13(12.3)		
Trading	72(66.1)	75(70.8)		
Artisan	18(16.5)	13(12.3)		
Farming	4(3.7)	4(3.8)	4.867	0.432
Housewife	3(2.8)	0(0.0)		
Professional	0(0.0)	1(0.9)		

***Others are Politician, Traditional doctor and Late/deceased**

Table 4.5: Parents' types of Occupation **N=215**

Types of Occupation	Baseline (N=215)			
	EG (n=109) No (%)	CG (n=106) No (%)	χ^2	P-value
Civil servant	13 (10.8)	14 (13.2)		
Trading	60(55.5)	61 (57.5)		
Artisan	19(17.4)	22 (20.8)		
Farming	3(2.8)	5 (4.7)		
Housewife	2(1.8)	0 (0.0)	10.725	0.192
Labourer/Cleaner	2(1.8)	0 (0.0)		
Self-employed	6(5.5)	3 (2.7)		
Clergy	4(3.7)	0 (0.0)		
Retired	0(0.0)	1 (0.9)		
Total	**109(100.0)**	**106(100.0)**		

Table 4.6: Parents' Marital status

Marital Status	Baseline (N=215)			
	EG (n=109)	CG (n=106)	χ^2	P-value
	No (%)	No (%)		
Married	99(90.8)	98 (92.5)		
Widowed	6(5.5)	4 (3.8)	3.030	0.553
Widower	2(1.8)	0 (0.0)		
Divorced	1(0.9)	2 (1.9)		
Separated	1(0.9)	2 (1.9)		
Total	**99(100.0)**	**98 (100.0)**		
Type of Marriage				
Monogamy	76(76.8)	72 (73.5)		
Polygyny	23(23.2)	26 (26.5)	0.285	0.592
Total	**99(100.0)**	**98 (100.0)**		
Living together				
Yes	82(82.8)	91(92.9)		
No	17(17.2)	7 (7.1)	4.630	0.031
Total	**99 (100.0)**	**98 (100.0)**		

Table 4.7: Parents' years of Marriage

Years of Marriage	Baseline (N=215)	
	EG (n=109)	CG (n=98)
	Freq (%)	Freq (%)
10-19 years	60 (55.0)	56 (57.1)
20-29 years	30 (27.5)	33 (33.7)
30-39 years	16 (14.7)	7 (7.1)
40-49 years	1 (0.9)	2 (2.0)
50 years and above	2 (1.8)	0 (0.0)
Total	**109 (100.0)**	**98 (100.0)**

Table 4.8: Proportion of Parents that live with Adolescents in the same house

Proportion of Parents that live with Adolescents	Baseline (N=197) EG (n=99) No (%)	CG (n=98) No (%)
Yes	84(84.8)	92 (93.9)
No	15(15.2)	6 (6.1)
Total	**99 (100.0)**	**98 (100.0)**

In summary, the characteristics of both the parent and their adolescent in the two LGA did not differ significantly in age, sex, status of adolescents and religion, meanwhile more adolescent were male in EG, and more are of Yoruba ethnic group in both EG and CG.

Section B: Adolescent Reproductive Health Knowledge

The adolescents' level of ARH was assessed from several question as presented in Appendix IIa and IIb. Firstly, respondents were asked to indicate True or False to seven statements on the ways to prevent pregnancy among adolescent (Q15); to indicate True or False to eight statements on the ways to avoid getting STI among adolescents (Q19); to mention at least three modes of transmission for HIV and 3 potential risk or problem associated with teenage pregnancy (Q20 and 21) and to indicate either True or False to 9 statements on physiological development of adolescent (Q22).

4.3 Mean knowledge scores on ARH at Baseline

The mean knowledge scores of adolescents on ARH was not significant at both the EG and CG the baseline with mean values of 14.7±5.5 and 15.2±4.2 with mean difference of 0.575 and P-value of 0.4 respectively (Table 4.9a). The mean knowledge scores of parents' knowledge on ARH was not significant at both the EG and CG the baseline with mean values of 21.4±3.3 and 21.3±3.3 respectively with mean difference of 0.064 and P-value of 0.888 (Table 4.9b) out of 30 points.

Table 4.9a: Adolescents' ARH mean knowledge score obtained for EG and CG at Baseline

Knowledge score	**Groups**	
	EG	**CG**
Mean	14.7±5.5	15.2±4.2
t-value	0.861	
Mean difference	0.575	
P-value	0.4	
Remark	**Not Significant**	

Table 4.9b: Parents' ARH mean knowledge score obtained for EG and CG at Baseline

Knowledge score	**Groups**	
	EG	**CG**
Mean	21.4±3.3	21.3±3.3
t-value	0.141	
Mean difference	0.064	
P-value	0.888	
Remark	**Not Significant**	

Four main domains were assessed under the ARH issues. These were: ways of preventing STI/HIV, potential risk of early pregnancy, mode of HIV transmission and knowledge of adolescent physiological development. Comparison of the mean knowledge score of ARH according to the four main domains revealed that at baseline, only knowledge on mode of HIV transmission and knowledge of adolescent physiological development were significant among the adolescent group (Table 4.10). None of these variables were significant among the parents group at the baseline as reflected in table 4.11.

Table 4.10: Comparison of mean knowledge score of Adolescents at baseline

Variables	**Groups**		**t-value**	**P-value**	**Remarks**
	EG (n=109)	**CG (n=106)**			
	$\overline{X}$ ± SD	$\overline{X}$ ± SD			
Adolescent physiological development	6.28±2.57	6.94±2.04	2.11	0.036	**Significant**
Potential risk of early pregnancy	2.77±1.74	3.02±1.64	1.076	0.283	**Not Significant**
Mode of HIV Transmission	3.36±2.05	4.17±1.79	3.087	0.002	**Significant**
Ways of preventing STI/HIV	4.91±2.43	4.36±2.18	1.742	0.083	**Not Significant**

Table 4.11: Comparison of mean knowledge score of Parents at Baseline

Variables	Groups		t-value	P-value	Remarks
	EG (n=109)	CG (n=106)			
	$\overline{X}$ ± SD	$\overline{X}$ ± SD			
Adolescent physiological development	6.76±1.28	6.85±1.58	0.446	0.656	**Not Significant**
Potential risk of early pregnancy	4.44±1.34	4.4±1.27	0.354	0.724	**Not Significant**
Mode of HIV Transmission	3.85±1.63	3.66±1.47	0.91	0.363	**Not Significant**
Ways of preventing STI/HIV	5.91±1.55	5.76±1.55	0.683	0.496	**Not Significant**

4.4 Mean knowledge scores on ARH at Follow-up

There was significant difference in mean knowledge score between both EG and CG at follow-up where mean knowledge of 22.9±1.6 in EG and 17.2±4.8 in CG were observed among adolescent (Table 4.12). Table 4.13 revealed similar significant difference in mean knowledge score between both EG and CG at follow-up. The mean knowledge of 27.0±1.9 in EG and 23.2±3.3 in CG were observed (Table 4.13).

Table 4.12: Adolescents' Overall ARH mean knowledge score obtained for EG and CG at Follow-up

Knowledge score	**Groups**	
	EG	**CG**
Mean	22.9±1.6	17.2±4.8
t-value	8.5	
Mean difference	5.7	
P-value	0.000	
Remark	**Significant**	

Table 4.13: Parents' Overall ARH mean knowledge score obtained for EG and CG at Follow-up

Knowledge score	**Groups**	
	EG	**CG**
Mean	27.0±1.9	23±3.3
t-value	7.85	
Mean difference	3.801	
P-value	0.000	
Remark	**Significant**	

At follow-up, the scores for EG were significantly higher than scores for CG (Table 4.14).

Table 4.14: Comparison of mean knowledge score of adolescents at Follow-up

Variables	Groups		t-value	P-value	Remarks
	EG (n=56)	CG (n=86)			
	$\overline{X}$ ± SD	$\overline{X}$ ± SD			
Adolescent physiological development	8.66±0.72	6.42±2.69	6.09	0.001	**Significant**
Potential risk of early pregnancy	3.71±1765	1.84±1.97	5.778	0.001	**Significant**
Mode of HIV Transmission	4.64±1.381	3.19±2.044	4.681	0.001	**Significant**
Ways of preventing STI/HIV	7.46±0.894	5.99±1.799	5.695	0.001	**Significant**

4.5 Comparison of ARH Mean Knowledge scores

Table 4.15 revealed the comparison of mean knowledge score for both the baseline and follow-up for EG and CG for adolescent and parents (Table 4.16).

Table 4.15: Adolescents' ARH mean knowledge score obtained for EG and CG at Baseline and Follow-up

Group	Mean ARH knowledge score				
	Baseline	Follow-up	t-value	P-value	Remark
EG	14.7±5.5	22.9±1.6	11.0	0.000	Significant
CG	15.2±4.2	17.2±4.8	2.9	0.003	Significant
t-value	0.861	8.5			
Mean difference	0.575	5.7			
P-value	0.4	0.000			
Remark	Not Significant	Significant			

Table 4.16: Parents' ARH mean knowledge score obtained for EG and CG at Baseline and Follow-up

Group	Mean ARH knowledge score				
	Baseline	**Follow-up**	**t-value**	**P-value**	**Remark**
EG	21.4±3.3	27.0±1.9	11.52	0.000	**Significant**
CG	21.3±3.3	23.2±3.3	3.83	0.000	**Significant**
t-value	0.141	7.85			
Mean difference	0.064	3.801			
P-value	0.888	0.000			
Remark	**Not Significant**	**Significant**			

4.6 Comparison of the mean knowledge score of ARH according to the domains

4.6.1 Comparison of the mean knowledge score of Adolescent

Comparison of mean knowledge score of all the four domains by adolescents at both baseline and follow-up in EG were significant as shown in Table 4.16; whereas at CG only knowledge of adolescent physiological development was not significant at follow-up. The comparison of mean knowledge score of adolescent at both baseline and follow-up in CG were significant for the 3 other domains as shown in Table 4.17. At follow-up, there was significant different in only two domains- potential risk of early pregnancy and knowledge of adolescent physiological development (Table 4.18). There is decline in mean knowledge score for the potential risky of early pregnancy and mode of HIV transmission due to follow-up as shown Table 4.18.

Table 4.17: Comparison of mean knowledge score of Adolescents in EG at Baseline and Follow-up

Variables	**Groups**		**t-value**	**P-value**	**Remarks**
	Baseline (n=109) $\overline{X}$ ± SD	**Follow-up (n=56)** $\overline{X}$ ± SD			
Adolescent physiological development	6.28±2.57	8.66±0.72	6.81	0.000	**Significant**
Potential risk of early pregnancy	2.77±1.74	3.71±1.77	2.395	0.001	**Significant**
Mode of HIV Transmission	3.36±2.05	4.64±1.38	1.765	<0.000	**Significant**
Ways of preventing STI/HIV	4.91±2.43	7.46±0.89	8.14	<0.000	**Significant**

Table 4.18: Comparison of mean knowledge score of Adolescents in CG at Baseline and Follow-up

Variables	Groups		t-value	P-value	Remarks
	Baseline (n=106) $\overline{X}$ ± SD	**Follow-up (n=86)** $\overline{X}$ ± SD			
Adolescent physiological development	6.94±2.04	6.42±2.69	1.54	0.13	**Not Significant**
Potential risk of early pregnancy	3.02±1.639	1.84±1.970	4.538	<0.000	**Significant**
Mode of HIV Transmission	4.17±1.791	3.19±2.044	3.552	<0.000	**Significant**
Ways of preventing STI/HIV	4.36±2.183	5.99±1.799	5.559	<0.000	**Significant**

Table 4.19: Comparison of mean knowledge scores of Adolescents in EG and CG at Follow-up

Variables	Groups		t-value	P-value	Remarks
	EG (n=56) $\overline{X}$ ± SD	CG (n=86) $\overline{X}$ ± SD			
Adolescent physiological development	7.77±0.47	7.28±0.94	3.605	0.000	**Significant**
Potential risk of early pregnancy	4.50±1.67	3.70±1.98	2.507	0.013	**Significant**
Mode of HIV Transmission	4.82±1.25	4.77±1.23	0.253	0.800	**Not Significant**
Ways of preventing STI/HIV	7.66±0.61	6.29±1.49	6.510	<0.496	**Not Significant**

4.6.2: Comparison of mean knowledge score of Parents on the four domains of ARH

Comparison of mean knowledge score of parents in EG at baseline and follow-up revealed that there was no significant difference about their knowledge of mode of HIV transmission while other domains were significant (Table 4.20). Likewise, comparison of mean knowledge score of parents in CG at baseline and follow-up revealed that ways of preventing STIs/HIV, potential risk of early pregnancy and adolescent physiological development were significant (Table 4.21). This might be the effect of the interview during the baseline because the respondents may become wiser and knowledgeable of the issue being interviewed upon.

Table 4.20: Comparison of mean knowledge scores of Parents in EG at Baseline and Follow-up

Variables	Groups		t-value	P-value	Remarks
	Baseline (n=109) $\overline{X}$ ± SD	Follow-up (n=56) $\overline{X}$ ± SD			
Adolescent physiological development	6.28±2.57	6.76±1.28	5.67	0.000	**Significant**
Potential risk of early pregnancy	3.85±.63	4.50±1.67	2.395	0.018	**Significant**
Mode of HIV Transmission	4.44±1.43	4.82±1.25	1.765	0.079	**Not Significant**
Ways of preventing STI/HIV	5.91±1.55	7.66±0.61	8.14	<0.000	**Significant**

Table 4.21: Comparison of mean knowledge score of parents in CG at Baseline and Follow-up

Variables	Groups		t-value	P-value	Remarks
	Baseline (n=106) $\overline{X}$ ± SD	**Follow-up (n=86)** $\overline{X}$ ± SD			
Adolescent physiological development	6.85±1.58	7.28±0.94	2.22	0.028	**Significant**
Potential risk of early pregnancy	3.66±1.47	3.70±1.98	0.150	0.881	**Not Significant**
Mode of HIV Transmission	4.38±1.27	4.77±1.23	2.145	0.033	**Significant**
Ways of preventing STI/HIV	5.76±1.55	6.29±1.49	2.382	0.018	**Significant**

Section C: Patterns and Quality of Communication between Parents and their Adolescents at Baseline

4.7 Ever Discussed ARH Issues

4.7.1 Ever discussed ARH Issues at Baseline

At baseline, only 20.2% and 21.7% in both EG and CG, respectively had ever communicated with their adolescents on ARH issues (Table 4.22). Further analysis indicated that there is no association between EG and CG at baseline. During the baseline, slightly above one-third of those that discussed ARH issue 36.0% and 39.1% did so in both EG and CG respectively within last week of data collection (Table 4.23). On the frequency of communication during the baseline, 31.8% and 30.4% said they usually had the discussion once or twice a week in both EG and CG respectively (Table 4.24). Also more than half 59.1% and 60.9% of the respondents in EG and CG, respectively mentioned self as the initiator of the discussion on sex, pregnancy and related issues (Table 4.24). Majority 81.8% and 95.7% of adolescents in both EG and CG respectively were satisfied with contents of discussion during the baseline (Table 4.25), while 95.5% of respondents in EG and 91.3% in CG were satisfied with the duration of discussion (Table 4.26).

Table 4.22: Proportion ever discussed ARH issues with Parents during last six month preceding data collection at Baseline

Ever Discussed ARH issues	EG (%)	CG (%)	χ^2	P-value
Yes	22 (20.2)	23 (21.7)		
No	87(79.8)	83 (78.3)	0.0745	0.7849
Total	**109 (100.0)**	**106(100.0)**		

Table 4.23 Last time discussed ARH issues parents during Baseline

Last time discussed ARH	Baseline (N=215)	
	EG(n=109) No (%)	CG (n=106) No (%)
Within Last week	8(36.0)	9(39.1)
Two weeks ago	3(13.6)	1(4.3)
Last month	5(22.7)	5(21.7)
Can't remember	3(13.6)	4(17.4)
Once in a while	3(13.6)	1(4.3)
6 month ago	0(0.0)	0(0.0)
Last year	0(0.0)	3(13.0)
Total	**22(100.0)**	**23(100.0)**

Table 4.24: Frequency of Discussing ARH with the parents at the Baseline

Frequency of Communication	Baseline (N=45)	
	EG (n=22) No (%)	CG (n=23) No (%)
Once/Twice a week	7(31.8)	7(30.4)
Once in a month	1(4.5)	4(17.4)
Twice in a month	3(13.6)	2(8.7)
Once in three month	4(18.2)	0(0.0)
Anytime	5(22.7)	8(34.8)
If there is a programme in church	1(4.5)	1(4.3)
Sometimes	1(4.5)	1(4.3)
Total	**22(100.0)**	**23(100.0)**
Initiators of the discussion		
My Self	13(59.1)	14(60.9)
My Parents	6(27.3)	9(39.1)
My pastor	2(9.1)	0(0.0)
My Neighbour	1(4.5)	0(0.0)
Total	**22(100.0)**	**23(100.0)**

Table 4.25: Proportion of Adolescent that were Satisfied with the contents of ARH discussed at Baseline

Satisfied with ARH contents	Baseline		*χ^2	P-value
	EG (%)	CG (%)		
Yes	18 (81.8)	22 (95.7)		
No	4 (18.1)	1(4.3)	2.1789	0.1399
Total	**22 (100.0)**	**23 (100.0)**		

χ^2 Yate corrected value

Table 4.26: Proportion of Adolescent that were Satisfied with the Duration of ARH discussion at Baseline

Satisfied with the Duration	Baseline		t-value	P-Value
	EG (%)	CG (%)		
Yes	21 (95.5)	21 (91.3)	0.3113	0.5769
No	1 (4.5)	2(8.7)		
Total	**22 (100.0)**	**23 (100.0)**		

4.7.2 Ever discussed ARH Issues at Follow-up

At the follow-up, 56(100.0%) of adolescent in EG ever discussed ARH Issues with parents during the last six months preceding the data collection compared to 4(4.7%) of their control counterpart (P<0.05) (Table 4.27). Almost half (48.2%) and a quarter (25.0%) at EG and CG, respectively did so had the discussion within the last week preceding follow-up data collection (Table 4.28). About a third (34.0%) in EG and half (50.0%) in CG had the discussion once/twice a week, while the discussion was initiated mainly by parents 71.4% and 75.5% at both the EG and CG respectively (Table 4.29). At follow-up, all adolescent that had discussion were said they satisfied with the contents of ARH discussed while 98.2% and 100.0% of respondents in EG and CG respectively claimed they were satisfied in respect to duration of the discussion (Table 4.30).

Table 4.27: Proportion ever discussed ARH issues with Parents during six months at Follow-up

Ever Discussed	EG (%)	CG (%)	χ^2	P-value
Yes	56(100.0)	4(4.7)		
			126.3690	<0.001
No	0(0.0)	82(95.3)		
Total	**56(100.0)**	**86(100.0)**		

Table 4.28: Last time discussed ARH issues parents Follow-up

Last time discussed ARH	Follow-Up (N=4)	
	EG (n=56) No (%)	CG (n=4) No (%)
Within Last week	27(48.2)	1(25.0)
Last month	7(12.5)	0(0.0)
Can't remember	1(1.8)	2(50.0)
Once in a while	7(12.5)	0(0.0)
6 month ago	5(8.9)	0(0.0)
Last year	9(16.1)	1(25.0)
Total	**56(100.0)**	**4(100.0)**

Table 4.29: Frequency of Discussing ARH with the parents at Follow-up

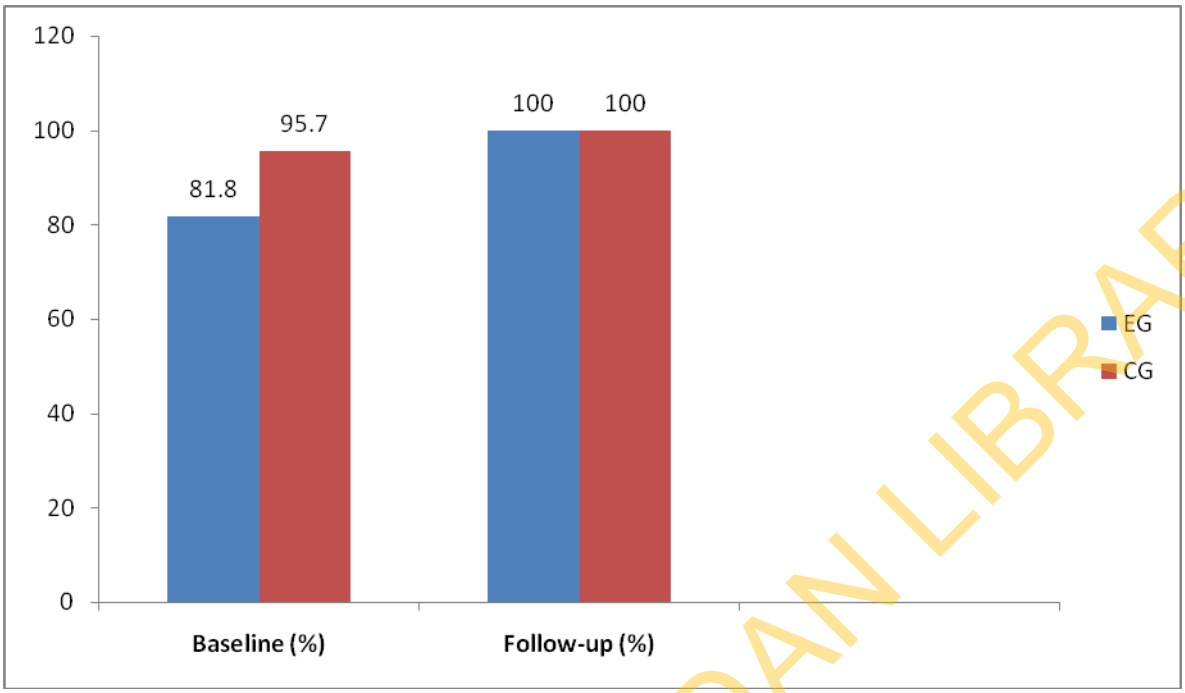
Frequency of Communication	Follow-Up (60)	
	EG (n=56)	CG (n=4)
	No (%)	No (%)
Once/Twice a week	19(34.0)	2(50.0)
Once in a month	3(5.4)	0(0.0)
Once in three month	2(3.6)	1(25.0)
Anytime	8(14.3)	0(0.0)
If there is a programme in church	1(1.8)	0(0.0)
Can't specify	23(41.1)	1(25.0)
Total	**56(100.0)**	**4(100.0)**
Initiators of the discussion		
My Self	16(28.6)	1(25.0)
My Parents	40(71.4)	3(75.0)
Total	**56(100.0)**	**4(100.0)**

Table 4.30: Proportion of Adolescent that were Satisfied with the duration of ARH discussion at Follow-up

Satisfied with the contents	Follow-up		Fisher's P-value
	EG (%)	CG (%)	
Yes	55 (98.2)	4 (100.0)	1.000
No	1(1.8)	0 (0.0)	
Total	**56 (100.0)**	**4 (100.0)**	

4.7.3 Comparison of frequency of ARH Communication at both Baseline and Follow-up

Comparison of respondent's satisfaction with the contents of issues discussed with parents indicated that no association existed between baseline and follow-up in the CG as shown in Table 4.31. However, 56(100.0%) of the EG at the follow-up reported satisfaction with the content of issues discussed compared to 18(81.8%) at baseline. The association was significant (Figure 4.1). Comparison of adolescents ever discuss ARH issues with their parents at baseline indicated a not significant different both at EG and CG were more female adolescent ever had discussion on ARH issues (Table 4.31a). At follow-up, more female adolescents had discussion with their parents in EG compared with their male counterpart with a significant different in EG only (Table 4.31b).



At baseline $\chi^2 = 2.1789$

At follow-up $\chi^2 = 20.1923$

Figure 4.1: Proportion of adolescent Respondents satisfied with the contents of discussion

Table 4.31 Proportion of adolescents that Satisfied with contents of issue discussed

Variables	Baseline (%)	Follow-up (%)	χ^2	P-value
EG				
Yes	18(81.8)	56(100.0)		
			10.7322	0.0010
No	4(18.2)	0(0.0)		
Total	**22(100.0)**	**56(100.0)**		
CG				
Yes	22(95.7)	4(100.0)		
No	1(4.3)	0(0.0)	0.1806	0.6708
Total	**23(100.0)**	**4(100.0)**		

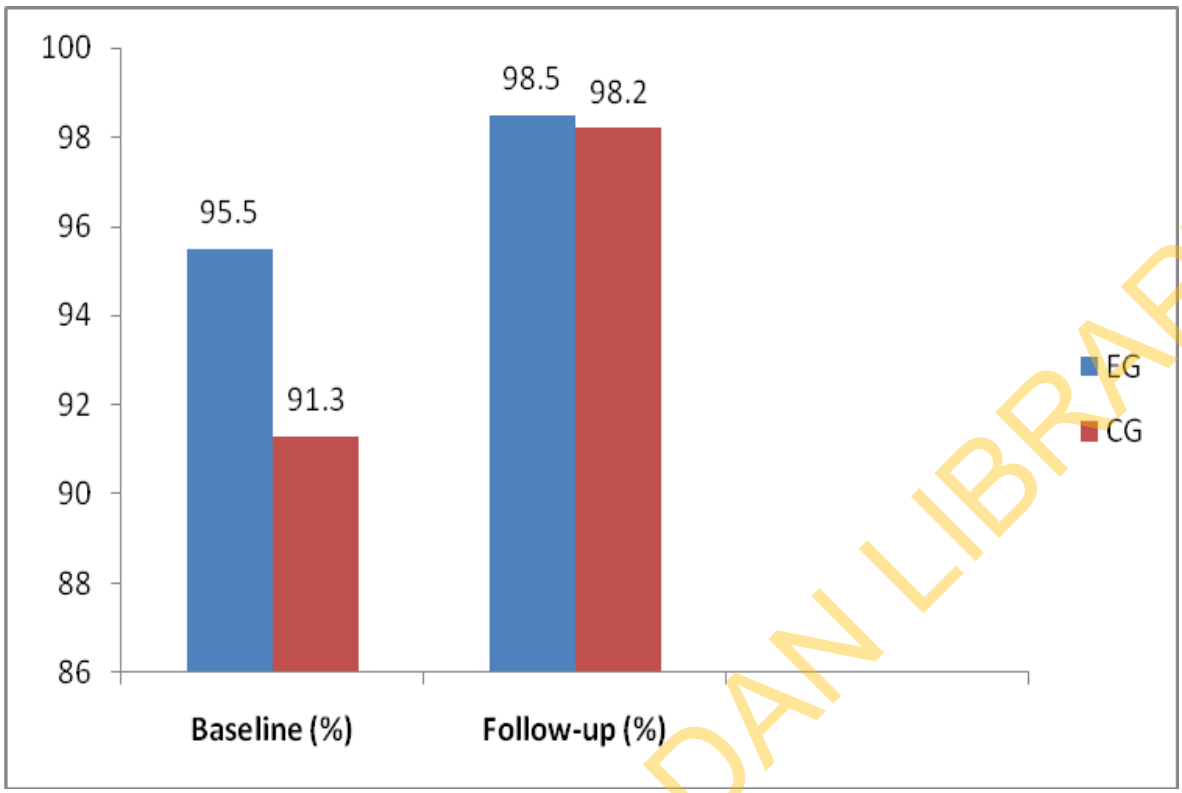


Figure 4.2: Proportion of adolescent Respondents satisfied with the duration of discussion

Table 4.31a: Adolescents ever Discussed ARH issues with parents in the last six months preceding the study by Sex at Baseline

Variables	Baseline			
	Male (n=78)		Female (n=112)	
	EG (%)	CG (%)	EG (%)	CG (%)
Ever Discussed ARH issues				
Yes	6(10.0)	4(22.8)	16(32.7)	19(30.2)
No	54(90.0)	14(77.8)	33(67.3)	44(69.8)
P-value	0.174		0.778	
Comments	**Not Significant**		**Not Significant**	

Table 4.31b: Adolescents ever Discussed ARH issues with parents in the last six months preceding the study by Sex at Follow-up

Variables	Follow-up			
	Male (n=85)		Female (n=77)	
	EG (%)	CG (%)	EG (%)	CG (%)
Ever Discussed ARH issues				
Yes	19(100.0)	2(4.3)	37(100.0)	2(5.0)
No	0(0.0)	44(95.7)	0(0.0)	38(95.0)
P-value	0.000		0.000	
Comments	**Significant**		**Significant**	

At follow-up, 100.0% of respondents claimed to understand what parents talked about and there were clear about the contents of discussion with parents. While at CG only 75.0% of adolescents perceived parents clarified issues that were difficult to understand (Table 4.32 and Table 4.33).

Majority (81.8%) of respondents in EG acknowledged that their parents responded to their questions and request quickly during discussion at baseline while 78.3% of CG said the discussion ran smoothly without any uncomfortable silent moments. There was an increase at the follow-up when 98.2% of respondents from EG acknowledged that their parents responded to their questions and requests quickly during discussion while 50.0% of CG said that their parents listened to them during the discussion (Table 4.34 and 4.35).

On issue of comfort in discussing ARH issues with parents at baseline, less than half (45.5%) of adolescents in EG were nervous talking to parents while majority (82.6%) in the CG were comfortable interacting with parents. At follow-up, only few (5.4%) of adolescents in EG and 25.0% at CG claimed to be nervous talking to parents. All (100.0%) in both EG and CG felt parents are trustworthy and were comfortable in interacting with parents at follow-up (Table 4.36, 4.37 and 4.38).

Table 4.39 revealed that majority 81.8% and 82.6% of respondents in the EG and CG respectively supported the idea that adolescents need to discuss ARH issues with their parents at baseline. At follow-up, only 8(14.3%) at EG did not support the idea whereas, all the respondents did support the idea in CG (Table 4.40). Comparison of proportion of those that supported the idea of communicating ARH with their adolescent indicated no significant different among the parents (Table 4.41).

Majority 72.7% and 87.0% of the respondents in EG and CG respectively perceived parents seemed interested in the ARH related discussion at baseline. During follow-up, about a quarter (25.9%) in the CG about one-third (33.9%) in EG perceived parents seemed somehow interested in the discussion (Table 4.40).

At the baseline, all respondents (100.0%) in EG and 91.3% in CG affirmed that they would like to continue discussing ARH issues with their adolescent children. During the follow-up, all respondents (100.0%) in both EG and CG said they would like to continue the discussion.

Table 4.32: Perception relating to the Clarity of content of the discussion with parents at Baseline **N=45**

Clarity of message	EG (n=22)		CG (n=23)		Total (%)
	Yes (%)	No (%)	Yes (%)	No (%)	
Understood what parents talked about	22(100.0)	0(0.0)	22(95.7)	1(4.3)	45(100.0)
Understood the importance of the message shared	22(100.0)	0(0.0)	22(95.7)	1(4.3)	45(100.0)
Parents clarified issues that were difficult to understand	18(81.8)	4(8.2)	22(95.7)	1(4.3)	45(100.0)
Parent understood the reproductive health concern I shared	21(95.5)	1(4.5)	22(95.7)	1(4.3)	45(100.0)
Message exchange easily understood by the adolescent	21(95.5)	1(4.5)	22(95.7)	1(4.3)	45(100.0)

Table 4.33: Respondents perception relating to the Clarity of content of the discussion with parents (Follow-up)

Clarity of message	EG (n=56)		CG (n=4)		Total (%)
	Yes (%)	No (%)	Yes (%)	No (%)	
Understood what parents talked about	56(100.0)	0(0.0)	4(100.0)	0(0.0)	60(100.0)
Understood the importance of the message shared	56(100.0)	0(0.0)	4(100.0)	0(0.0)	60(100.0)
Parents clarified issues that were difficult to understand	56(100.0)	0(0.0)	3(75.0)	1(25.0)	60(100.0)
Parent understood the reproductive health concern I shared	54(96.4)	2(3.6)	4(100.0)	0(0.0)	60(100.0)
Message exchange easily understood by the adolescent	55(98.2)	1(1.8)	4(100.0)	0(0.0)	60(100.0)

Table 4.34: Respondents' perception relating to parents' Responsiveness during the discussion at Baseline

Perceived parents' responsiveness to the message	EG (n=22) Yes (%)	EG (n=22) No (%)	CG (n=23) Yes (%)	CG (n=23) No (%)	Total (%)
My parent responded to my question and request quickly during the discussion	18(81.8)	4(18.2)	19(82.6)	4(17.4)	45(100.0)
The discussion ran smoothly without any uncomfortable silent moments	19(86.4)	3(13.6)	18(78.3)	5(21.7)	45(100.0)
My parents were willing to listen to my perspectives	19(86.4)	3(13.6)	21(91.3)	2(8.7)	45(100.0)
Parents addressed my concerns immediately	20(90.9)	2(9.1)	21(91.3)	2(8.7)	45(100.0)
Listened to one another during the discussion during discussion	15(68.2)	7(31.8)	13(56.5)	10(43.5)	45(100.0)

Table 4.35: Respondents' perception relating to parents' Responsiveness during the discussion at Follow-up

Perceived parents' responsiveness during the discussion	EG(n=56)		CG(n=4)		Total
	Yes (%)	No (%)	Yes (%)	No (%)	
My parent responded to my question and request quickly during the discussion	55(98.2)	1(1.8)	4(100.0)	0(0.0)	60(100.0)
The discussion ran smoothly without any uncomfortable silent moments	55(98.2)	1(1.8)	4(100.0)	0(0.0)	60(100.0)
My parents were willing to listen to my perspectives	56(100.0)	0(0.0)	4(100.0)	0(0.0)	60(100.0)
Parents addressed my concerns immediately	56(100.0)	0(0.0)	4(100.0)	0(0.0)	60(100.0)
Listened to one another during the discussion during discussion	55(98.2)	1(1.8)	2(50.0)	2(50.0)	60(100.0)

Table 4.36: Respondents' perception relating to whether they were comfortable discussing reproductive issues with parents at Baseline

Whether comfortable during the discussion	EG (n=22)		CG (n=23)		Total
	Yes (%)	No (%)	Yes (%)	No (%)	N(%)
Nervous talking to parents	10(45.5)	12(54.5)	10(43.5)	13(56.5)	45(100.0)
Felt parents trusted me	14(63.6)	8(36.4)	16(69.6)	7(30.4)	45(100.0)
Felt parents are trustworthy	20(90.9)	2(9.1)	19(82.6)	4(17.4)	45(100.0)
Comfortable interacting with parents	20(90.9)	2(9.1)	21(82.6)	2(8.7)	45(100.0)
My parents feel comfortable discussing with me	21(95.5)	1(4.5)	22(95.7)	1(4.3)	45(100.0)

Table 4.37: Respondents' perception relating to whether they were comfortable discussing reproductive issues with parents at CG at Follow-up

Whether comfortable during the discussion	CG (n=4)	
	Yes (%)	No (%)
Nervous talking to parents	1(25.0)	3(75.0)
Felt parents trusted me	4(100.0)	0(0.0)
Felt parents are trustworthy	4(100.0)	0(0.0)
Comfortable interacting with parents	4(100.0)	0(0.0)
My parents feel comfortable discussing with me	4(100.0)	0(0.0)

Table 4.38: Respondents' perception relating to whether they were comfortable discussing reproductive issues with parents at EG at Follow-up

Whether comfortable during the discussion	EG (n=56)	
	Yes (%)	No (%)
Nervous talking to parents	3(5.4)	53(94.6)
Felt parents trusted me	56(100.0)	0(0.0)
Felt parents are trustworthy	56(100.0)	0(0.0)
Comfortable interacting with parents	54(96.4)	2(3.6)
My parents feel comfortable discussing with me	56(100.0)	0(0.0)

Table 4.39: Proportion of the parents that supported the idea discussing ARH with the adolescent at Baseline

Supported the idea discussing ARH issues	Baseline (N=45)			
	EG (n=22) No (%)	CG (n=23) No (%)	χ^2	P-value
Yes	18 (81.8)	19 (82.6)	0.0048	0.9447
No	4 (18.2)	4 (17.4)		
Total	**22 (100.0)**	**23(100.0)**		

Table 4.40: Proportion of the parents that supported the idea discussing ARH with the adolescent at Follow-up

Supported the idea discussing ARH issues	Follow-Up (60)		χ^2	P-value
	EG (n=56) No (%)	CG (n=4) No (%)		
Yes	48(85.7)	4(100.0)	0.6593	0.4167
No	8(14.3)	0(0.0)		
Total	**56(100.0)**	**4(100.0)**		

Table 4.41: Comparison of the parents that supported the idea discussing ARH with the adolescent

Supported the idea discussing ARH issues	Baseline (N=45)		Follow-Up (60)	
	EG (n=22) No (%)	CG (n=23) No (%)	EG (n=56) No (%)	CG (n=4) No (%)
Yes	18(81.8)	19(82.6)	48(85.7)	4(100.0)
No	4(18.2)	4(17.4)	8(14.3)	0(0.0)
Total	**22(100.0)**	**23(100.0)**	**56(100.0)**	**4(100.0)**

Table 4.42: Respondents' perception of how parents responded to the ARH related discussion

Perceived nature of response	Baseline (N=45)		Follow-Up (60)	
	EG (n=22) Freq (%)	CG (n=23) Freq (%)	EG (n=56) Freq (%)	CG (n=4) Freq (%)
Looked very interested	16 (72.7)	20 (87.0)	25(44.6)	3(75.0)
Looked somehow interested	5 (22.7)	2 (8.7)	19(33.9)	1(25.9)
Indifferent	1 (4.5)	1 (4.3)	12(21.4)	0(0.0)
Total	22 (100.0)	23 (100.0)	56(100.0)	4(100.0)
Proportion of those that would like to continue the discussion				
Yes	22 (100.0)	21 (91.3)	56(100.0)	4(100.0)
No	0 (0.0)	2 (8.7)	0(0.0)	0(0.0)
Total	**22 (100.0)**	**23 (100.0)**	**56(100.0)**	**4(100.0)**

4.8 Mean Comparison of quality of communication

4.8.1 Mean Comparison of quality of communication at Baseline

Comparison of mean quality of communication score obtained for EG and CG at baseline indicated a mean quality of communication of 12.8±2.7 at EG and 12.7±2.8 in CG with a t-value of 0.095 and p-value > 0.05 which is not significant (Table 4.43). During the follow-up after the intervention, there was a general increase in the mean knowledge score at both the EG and CG with a significant different of P<0.05 (Table 4.44). Table 4.45 indicated that there was a significant different between baseline and follow-up in the EG and also a significant different in follow-up at both EG and CG.

Table 4.43: Mean quality of communication score obtained for EG and CG at Baseline

Quality of Communication Score	**Groups**	
	EG	**CG**
Mean	12.8±2.7	12.7±2.8
t-value	0.095	
P-value	0.925	
Remark	**Not Significant**	

Table 4.44: Mean quality of communication score obtained for EG and CG at Follow-up

Quality of Communication Score	Groups	
	EG	CG
Mean	14.8±0.5	14.0±0.82
t-value	2.882	
P-value	0.006	
Remark	**Significant**	

Table 4.45: Comparison of Mean quality of communication score obtained for EG and CG at baseline and post intervention

Groups	Mean quality of communication score				
	EG	**CG**	**t-value**	**P-value**	**Remark**
Baseline	12.8±2.7	12.7±2.8	0.095	0.925	**Not Significant**
Follow-up	14.8±0.82	14.0±0.8	2.882	0.006	**Significant**
t-value	5.243	0.866			
P-value	<0.001	0.395			
Remark	**Significant**	**Not Significant**			

4.9 Adolescent's Sexual Practices

Table 4.46 presents the sexual practices of the adolescent during the baseline and the follow-up. During the baseline, 41(37.6%) of adolescent currently had boy or girl friend in the EG while 30(28.3%) had so in the CG community. At the follow-up, there was a reduction in the number of adolescents that said they had either boy or girl friend. Out of those that already had boy/girl friend, 6(14.6%) and 11(36.7%) opened up that they already had sexual intercourse at the EG and CG respectively during the baseline (Table 4.47).

At the follow-up, only 3(27.3%) and 4(25.0%) did so at both EG and CG respectively. Majority of these had their sexual encounter within six months prior to the baseline data collection than those that did so at the follow-up (Table 4.48). Comparison of the sexual practices of the adolescents revealed that there was no significant different between the male and female adolescent at both EG and CG during baseline and follow-up (Table 4.48a and b).

Table 4.46 Adolescent's Sexual practice during Baseline at EG and CG at Baseline

Had Boy/Girl friend	Baseline (N=215)			
	EG (n=109)	CG (n=106)	P-Value	χ^2
	No (%)	No (%)		
Yes	41 (37.6)	30 (28.3)		
No	68 (62.4)	76 (71.7)	0.1466	2.1072
Total	**109 (100.0)**	**106 (100.0)**		
Ever had Sex				
Yes	6 (14.6)	11(36.7)		
Never	35 (85.4)	19 (63.3)	0.0316	4.6179
Total	**41 (100.0)**	**30 (100.0)**		
Sexual Experience in the 6 months preceding study				
Yes	5 (83.3)	6 (54.5)		
No	1(16.7)	5 (45.5)	0.2352	1.4089
Total	**6 (100.0)**	**11 (100.0)**		
Used Condom during the last sexual intercourse				
Yes	3 (60.0)	4 (66.7)		
No	2 (40.0)	2 (33.3)	0.8190	0.0524
Total	**5 (100.0)**	**6 (100.0)**		

Table 4.47 Adolescent's Sexual Practice in EG and CG during the Follow-up

Had Boy/Girl friend	Follow-Up (N=142)		P-value	χ^2
	EG (n=56)	CG (n=86)		
	Freq (%)	Freq (%)		
Yes	11(19.6)	12(14.0)	0.3684	0.8088
No	45(80.4)	74(86.0)		
Total	**56(100.0)**	**86(100.0)**		
Ever had Sex				
Yes	3(27.3)	4(25.0)	0.7576	0.0952
Never	8(72.7)	8(75.0)		
Total	**11(100.0)**	**12(100.0)**		
Sexual Experience in the 6 months preceding study				
Yes	2(66.7)	1(25.0)	0.2702	1.2153
No	1(33.3)	3(75.0)		
Total	**3(100.0)**	**4(100.0)**		
Used Condom during the last sexual intercourse				
Yes	1(50.0)	1(100.0)	0.3865	0.7500
No	1(50.0)	0(0.0)		
Total	**2(100.0)**	**1(100.0)**		

Table 4.48 Comparison of Adolescent's Sexual Practice during Baseline and Follow-up at EG and CG

Had Boy/Girl friend	Baseline (N=215)		Follow-Up (N=142)	
	EG(n=109)	CG (n=106)	EG (n=56)	CG (n=86)
	Freq (%)	Freq (%)	Freq (%)	Freq (%)
Yes	41(37.6)	30(28.3)	11(19.6)	12(14.0)
No	68(62.4)	76(71.7)	45(80.4)	74(86.0)
Total	**109(100.0)**	**106(100.0)**	**56(100.0)**	**86(100.0)**
Ever had Sex				
Yes	6(14.6)	11(36.7)	3(27.3)	4(33.3)
Never	35(85.4)	19(63.3)	8(72.7)	8(66.7)
Total	**41(100.0)**	**30(100)**	**11(100.0)**	**12(100.0)**
Sexual Experience in the last six months preceding data collection				
Yes	5(83.3)	6(54.5)	2(66.7)	1(25.0)
No	1(16.7)	5(45.5)	1(33.3)	3(75.0)
Total	**6(100.0)**	**11(100.0)**	**3(100.0)**	**4(100.0)**
Used Condom during the last sexual intercourse				
Yes	3(60.0)	4(66.7)	1(50.0)	1(100.0)
No	2(40.0)	2(33.3)	1(50.0)	0(0.0)
Total	**5(100.0)**	**6(100.0)**	**2(100.0)**	**1(100.0)**

Table 4.48a Sexual Experience in the last six months preceding data collection by Sex at Baseline

Variables	Baseline			
	Male (n=9)		Female (n=8)	
	EG (%)	CG (%)	EG (%)	CG (%)
Ever had Sex				
Yes	2(100.0)	4(57.1)	3(75.0)	2(50.0)
No	0(0.0)	3(42.9)	1(25.0)	2(50.0)
Fisher's P-value	0.257		0.465	
Comments	**Not Significant**		**Not Significant**	

Table 4.48b Sexual Experience in the last six months preceding data collection by Sex at Follow-up

Variables	Follow-up			
	Male (n=1)		Female (n=6)	
	EG (%)	CG (%)	EG (%)	CG (%)
Ever had Sex				
Yes	0(0.0)	0(0.0)	2(66.7)	1(33.3)
No	0(0.0)	1(100.0)	1(33.3)	2(66.7)
P-value	-		0.414	
Comments	**Not Significant**		**Not Significant**	

4.10 Testing of Hypotheses

Three hypotheses were tested for this study to determine the effects of the intervention on the study outcomes. In testing these hypotheses, independent sample t-test was conducted at 0.05 level of significance. The decision rule applied was that if the p-value computed was less or equal to the cut-off p-value of 0.05, the null hypotheses will be rejected in favour of the alternative hypothesis and vice-versa.

Hypothesis 1a

The first hypothesis states that there will be a significant difference between adolescents' mean knowledge scores of adolescent reproductive health issue at EG and CG before and after intervention.

In order to test this hypothesis, a 30-point scale was constructed which covers some question items in the questionnaire that focus on some of the adolescent reproductive health issues. That were used for the construction of the 33-point scale have been discussed fully in the previous chapter. At pre-intervention, the mean overall adolescents' knowledge score of ARH issues were 14.7 (SD=5.5) and 15.2 (SD=4.2) respectively in the EG and the CG and this observation was not significant (p=0.4) (Table 4.49). However, at post-intervention, the score increased to 22.9 (SD=1.6) in the EG compared with slight increased of 17.2 (SD=4.8) in the CG. This observed difference was statistically significant (p=0.000) (Table 4.49). Hence, the null hypothesis was rejected while the alternate hypothesis was accepted. It can be said from the ongoing that the intervention had more influence on adolescents' knowledge of ARH.

Hypothesis 1b

There will be a significant difference between parents' mean knowledge scores of adolescent reproductive health at EG and CG before and after intervention.

At pre-intervention, the mean overall parents' knowledge score of ARH issues were 21.4 (SD=3.3) and 21.3 (SD=3.3) respectively in the EG and the CG and this observation was not significant (p=0.888) (Table 4.50). However, at post-intervention, the score increased to 27.09 (SD=1.9) in the EG compared with slight increased to 23.0 (SD=3.3) in the CG. This

observed difference was statistically significant (p=0.000) (Table 4.50). Hence, the null hypothesis was rejected while the alternate hypothesis accepted. It can be said from the ongoing that the intervention had more influence on parents' knowledge of ARH.

Hypothesis 2

There will be a significant difference between quality of communication between parents and adolescent at EG and CG before and after intervention.

To test this hypothesis, quality of communication were measured under three main domains. These domains were clarity of message (5 points), responsiveness to the message (5 points) and comfortable during the discussion (5 points) making a total of 15 points. At pre-intervention, the mean quality communication scores between parents and their adolescent were 12.8 (SD=2.7) and 12.7 (SD=2.8) respectively in the EG and the CG and this observation was not significant (p=0.925) (Table 4.51). However, at post-intervention, the score increased to 14.8 (SD=0.5) in the EG compared with the increased to 14.0 (SD=0.82) in the CG. This observed difference was statistically significant (p=0.006) (Table 4.51). Hence, the null hypothesis was rejected while the alternate hypothesis was accepted. It can be said from the ongoing that the intervention had more influence on quality of communication between parents and adolescent at EG and CG.

Hypothesis 3

There will be a significant difference between adolescent sexual practices at EG and CG before and after intervention.

The result obtained at pre-intervention showed that 14.6% and 36.7% in the EG and CG had ever had sex respectively. These observed results were averagely significant (p=0.031) (Table 4.52). However, at post-intervention, there was decrease in number of people that had ever had sex because some of them were lost to attrition and could not be interviewed at the follow-up. The observation showed measure of p=0.752 which was statistically not significant. Therefore, the alternate hypothesis four which stated that "there will be a significant difference between adolescent sexual practices at EG and CG before and after intervention" was rejected and thereby accept the null hypothesis.

Table 4.49 Adolescents' Mean Knowledge Score of Adolescent Reproductive Health Issues

Group	Pre-Intervention			Post-Intervention			Statistical Test	
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Pre	Post
EG	109	14.7	5.5	56	22.9	1.6	t=0.861	t=0.85
CG	106	15.2	4.2	86	17.2	4.8	P=0.4	P=0.000
Total	215			142				

Table 4.50 Parents' Mean Knowledge Score of Adolescent Reproductive Health Issues

Group	Pre-Intervention			Post-Intervention			Statistical Test	
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Pre	Post
EG	109	21.4	3.3	56	27.0	1.9	t=0.141	t=7.83
CG	106	21.3	3.3	86	23.0	3.3	P=0.888	P=0.000
Total	215			142				

Table 4.51 Mean quality of ARH communication between parents and adolescent at EG and CG

Group	Pre-Intervention			Post-Intervention			Statistical Test	
	N	Mean	Std. Dev.	N	Mean	Std. Dev.	Pre	Post
EG	22	12.8	2.7	56	14.8	0.5	t=0.095	t=2.882
CG	23	12.7	2.8	4	14.0	0.82	p=0.925	p=0.006
Total	45			60				

Table 4.52 Adolescent Sexual Practices at EG and CG before and after intervention

Ever had sex	Pre-Intervention		Post-Intervention		P-value	
	EG(N=41) n(%)	CG(N=30) n(%)	EG(N=11) n(%)	CG(N=12) n(%)	Pre	Post
Yes	6(14.6)	11(36.7)	3(27.3)	4(33.3)	χ^2 =4.618	χ^2 =0.0996
No	35(85.4)	19(63.3)	8(72.7)	8(66.7)	P=0.031	P=0.752
Total	**41(100.0)**	**30(100.0)**	**11(100.0)**	**12(100.0)**		

4.11 Evaluation of the Programme by the Parents and Adolescents

This section of the chapter provides the opportunity to hear from those that delivered the interventions to the adolescent children. Evaluation in-depth interview guide was used to elicit feedback information from the parents and adolescents that participated in the intervention at EG community on the strength, weakness and benefits of the intervention. The feedback from the community is presented below.

4.11.1 Parents' Evaluation of the Intervention

Eight parents completed the evaluation interview. Six of the parents were mothers. They identified some strengths of the programme that. According to them the programme "*has exposed the parents on how to communicate to their youth/adolescent*", "*promote good communication skill between parents and their adolescent*", "*it gives the parents boldness to communicate with their adolescent and that it prevents the young ones from premarital affairs*" and "*effective mobilization of participants towards attending training programme*".

Despite their perceived strengths, the parents identified three weaknesses which should be addressed for future similar training intervention. The weaknesses identified were "*not all the parents in the community benefitted from the programme*", "*the attendance of the participants was low to various meetings*" and "*the awareness of the programme in the community was not enough*".

The parents offered some suggestions for improvement. These includes "*the programme should be a continuous programme*", "*the training should involve adolescents -boys and girls because they are potential future wives and husbands*", "*the training should be on weekends to encourage more people to attend*" and "*there should be more awareness campaign of such programme in the community*".

All the parents agreed that they have learnt something new from the programme and some of the things learnt were that "the training programme opened their eyes on how to communicate with the children without abusing them using effective communication methods"; "how to maintain a cordial relationship with the children" and "how to teach the adolescents sex education and implication of pre-marital sexual intercourse".

The two major problems encountered by the parents during the implementation of the programme were that "*the children do not want to be corrected"* and "*it was initially difficult for the children to understand the messages but they later understood and started asking questions"*.

Notwithstanding, all the parents recommended that a similar programme should be organised in other communities. The reasons for their opinion was to prevent pre-marital sex and unwanted pregnancies among the adolescents, to serve as a training ground on reproductive health education for the parents especially those that are ignorant.

4.11.2 Evaluation by the Adolescents Children in intervention community

Ten adolescent children completed the evaluation form. Eight of them indicated that their mothers were trained and majority of them had benefitted from the programme. Such benefits include "*better knowledge about life, adolescent reproductive health issue and HIV-AIDS prevention"*. The programme is also beneficial in that parents are more efficient in delivering adolescent health information.

All of them have been able to make changes as a result of the discussion with their parents. Some of the changes are "*keeping away from bad friends", "being more obedient and focusing more on our studies/work"*. The adolescents offered some suggestions for improvement. These included *"government should assist in implementing such programs", "more public enlightenment about the program is necessary to create more awareness before the programme", "more parents should be invited to the programme and the programme must not be conducted on the market days"*.

Virtually all the adolescents agreed that they did not encounter any problem during the implementation of the programme in the community and they all recommended that a similar program should be implemented in other communities. The reasons given for the recommendation above are that "*it would give more people the opportunity to be aware of HIV-AIDS information; reproductive health issues and that parent can be enlightened on how to educate their children"*.

The adolescents agreed that they noticed difference in the way their parents discussed with them in such a way that their parents are more direct and are more friendly while discussing with them, they now answer their questions patiently, more straight forward in their discussion and that they now talk to them better on one-on-one basis.

4.12 Evaluation of what discussed with Children using Management Information System (MIS) Form

Forty-eight (85.7%) trained parents were able to consistently filled the Management Information System (MIS) Form developed correctly. The computation of the form revealed that the parents in the EG were able to discuss ARH issues 1,218 times (57.7%) out of 2110 discussions had during the six months implementation period. These included how to prevent pregnancy (407:19.3%); HIV/AIDS prevention (392: 19.1%) and STI prevention (403:19.3%). Other issues discussed with their adolescent were: importance of study (498: 23.6%); face trade/work (392:18.7%) and importance of prayer 2(0.1%) (Figure 4.3).

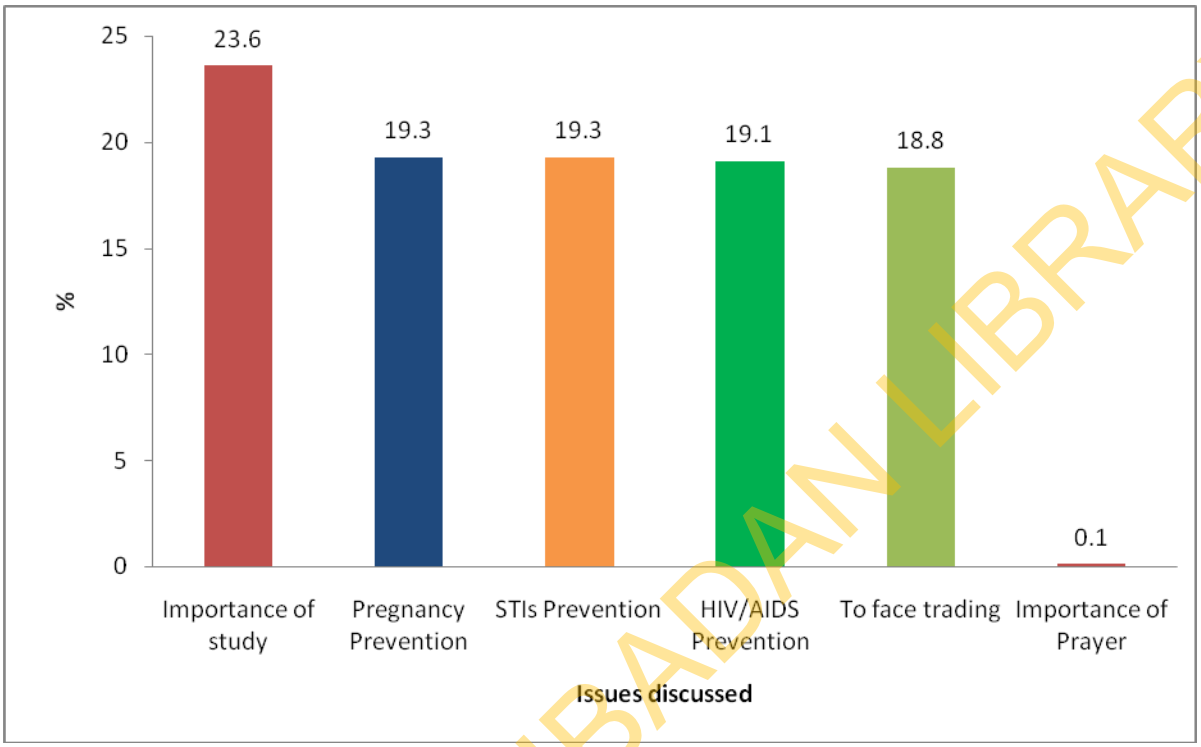


Figure 4.3: Issues discussed by Parents with their Adolescents

CHAPTER FIVE

5.0 DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the results that derived in chapter four which include the changes that occurred in the three variables of interest as guided by the research questions. These were knowledge of ARH issues, initiation and frequency of communication, and quality of communication between parents and their adolescents within the period of six months of intervention. These changes in pattern and quality of communication could be attributed to the educational interventions conducted on the EG based on the study design and proof of concept. Comparison was made with previous studies to highlight the similarities and differences. Finally, conclusion was drawn, lessons learnt were documented, recommendations were provided and suggestions made for future intervention study on Adolescent Reproductive Health communication.

5.2 Discussion

5.2.1 Baseline Characteristics of both Adolescent and Parents respondents

The socio-demographic variables of adolescent respondents for both the EG and CG were similar with no significant differences during the baseline. This indicated that the two groups were comparable. Likewise the parent groups from EG and CG share similar features. These communities have similar characteristics and these characteristics make comparison desirable.

5.2.2 Adolescents' Knowledge of Reproductive Health

Majority of adolescents had good knowledge of ARH issues at the baseline. This good knowledge cut across both the EG and CG. However, the comparison of adolescents' mean knowledge score obtained by both EG and CG at baseline was not significant. Comparison of adolescents' knowledge score at baseline and follow-up in EG revealed an increase in knowledge score at the post-intervention when compared with the baseline. The difference was statistically only significant for the EG while the increase observed at the CG was not significant. At post-intervention, the difference observed in the mean knowledge score was significant. There was a significant difference in the P-value observed when compared baseline and post-intervention in both EG and CG were compared. A similar observation was

noted by Ajuwon and Brieger (2007) who also reported that the knowledge gained by adolescents in the intervention schools was significantly higher than that in the control group.

This finding from this study was also consistent with Akinbami (2013) that documented increase in apprentice knowledge from what was obtained during the baseline. This finding agreed with the report of several studies that used peer education to reach out to the youths and vulnerable groups with information on sexuality and reproductive health (Ajuwon, 2000; UNICEF, 2003; UNFPA, 2004). Kirby and Douglas (1999) also reported that HIV prevention and sex education conducted in schools had significant effect on the knowledge and sexual life of adolescents.

At baseline, higher proportion of the parents had good knowledge of ARH issues at both EG and CG. There was an increase in number of those that had good knowledge at the post-intervention at both EG and CG. This was only significant at the EG indicating the effect of the intervention whereas there was no significant difference in the increase observed at the CG. Comparison of mean knowledge scores at baseline and post-intervention within the EG and CG showed a significant difference for the EG and this further strengthened the fact that knowledge gained in the EG was as a result of the training intervention. Parents' ability to play a more significant role in adolescent sexuality development depends among others on their knowledge and perception of the adolescence process and its implications (Emelumadu, Ezeama, Ifeadike, Ubajaka, Adogu, Umeh, Nwamoh, Ukegbu, and Onyeonoro. 2014).

However, there was an overall improvement in knowledge about ARH among the control groups at follow-up. Several factors may account for this. Firstly, it is possible that those in control groups were exposed to similar interventions in the interval between the baseline and follow-up. Secondly, the baseline interviews on ARH may have sensitized those in the control group to seek new information to educate themselves on the subject during the interval between baseline and follow-up surveys. Parents' ability to play a more significant role in adolescent sexuality development depends among others on their knowledge and perception of the adolescence process and its implications (Emelumadu, et al, 2014).

According to Emelumadu et al, 2014, most African parents may not be in a good position to provide sexuality information to their children because the information they provide is often

ambiguous and laced with fear; hence, it does not imbue confidence nor protect children from unhealthy sexual practices. On the other hand, taking into consideration the important role parents play in adolescent development, there is need to identify deficiencies in parent-child sexuality communication and initiate appropriate interventions to address them (Emelumadu, et al, 2014).

Accurate knowledge of sexuality is important for healthy sexuality development; it serves as a foundation for adolescents to understand their sexuality better, which in turn influences their sexual behaviour and the outcomes. Historically, families are known to be the primary source of sexuality information for children, but in recent times most interventions to improve adolescent sexual health are largely community-driven (Emelumadu, et al, 2014).

5.2.3 Patterns and Quality of Communication between Parents and their Adolescents

More parents, during follow-up at both EG and CG, reported to have discussed ARH with their adolescents than what was obtained during the baseline. This was expected for the EG but the increase might be the effect of the baseline data collection which might have gingered some parents up to start discussing ARH with their adolescents. This shows that more parents were able to overcome the barrier identified during the training. According to Yasemine and Heba (2012) in many parts of the world, adolescents are poorly informed about their health, bodies, sexuality and physical well-being. Adolescent girls in particular are often kept from learning about sexuality and reproductive health (SRH) issues because of cultural and religious sensitivities (Yasmine and Heba, 2012). This present study reveals that parents can discuss ARH issues with their adolescents if well equipped with adequate knowledge and skill to do so. The frequency of communication also increases from what was obtained during the baseline at the post-intervention. It also shows that parents were mainly the initiators of the discussion at both EG and CG.

Several barriers prevented adolescents from initiating SRH discussion. According to the study conducted by Yasmine and Heba (2012), mothers and their daughters identified barriers to initiating communication. Many mothers stated that they could only initiate discussions about SRH topics with their daughters on certain occasions, such as a life change or an event, or when girls seek certain information or ask for advice. Daughters reported that they were reluctant to ask their mothers for this type of information because of embarrassment; fear of judgment; and perceived lack of their mother's interest or willingness, time, and trust.

A significant factor that prevented many girls from initiating such a discussion was fear that their mothers would be suspicious of them and question their morals and behaviour. Many studies have suggested that adolescents prefer mothers as source of ARH issues. The study of Akin-Otiko (1998) suggests that the frequency of the parent-child communication on ARH issues is usually determined by the courage of the adolescents to raise such issues as even some mothers that are aware of their adolescents sexual activities often find it difficult to discuss ARH issues openly and therefore, have to wait for the adolescents to initiate the discussion (Akin-Otiko, 1998).

According to Yasemine and Heba (2012), parents are among the preferred sources of SRH education for adolescents around the world, and improving the quality of communication between parents and adolescents can protect adolescents from risky behaviour. Despite many communication barriers that emerged, the study findings demonstrate that both mothers and daughters were willing to talk and listen to each other (Yasmine and Heba, 2012). Addressing the lack of information, misconceptions, and the barriers to effective communication with their mothers can lead to improved knowledge for adolescent girls. With greater knowledge about SRH issues and a feeling of support from within the family, girls will be better able to face puberty and adolescence in healthy and empowered ways (Yasmine and Heba, 2012).

Many of the parents in EG affirmed that they were comfortable discussing ARH with their adolescents and would continue with the discussion after the intervention. This is contrary to a finding which reported that despite the reported level of comfort talking with each other, many mothers and daughters had not discussed puberty and menstruation, and many girls had experienced the onset of menstruation without any previous background on the event (Yasmine and Heba, 2012). The study revealed that even mothers and daughters who considered their relationships close and their communications good admitted that there were many taboo subjects that they could never discuss together (Yasmine and Heba, 2012).

The current finding also contradicts that of NARHS (2007) which reported that most respondents felt uncomfortable discussing sexual matters with different family members. A higher proportion of respondents felt comfortable discussing sexual matters with sisters (42%) and brothers (40%) than their mothers (31%) or fathers (25%) (NARHS, 2007). The intervention has a greater impact on the knowledge of both parents and adolescents in the four

main domains included in the ARH. The increase was so significant at the post-intervention in the EG. Studies have shown that the age group of 5-14 is least likely to be infected if equipped with the necessary information and life skills they require to make the right choices and stay free of infection (FME, 2010).

5.2.4 Parents' Communication Skill to Discuss ARH with Adolescents

The intervention was observed to have had a significant effect on the ability of parents to freely discuss issues relating to adolescent sexuality and reproductive health. This was evidenced in the increase discussion sessions had by parents with their adolescents after the intervention in EG compared with CG. Findings shows that at the end of six-month intervention, parents in EG had 2110 discussion sessions and 1,218 discussions on ARH issues with their adolescents. This strongly confirms that the educational intervention programme for the parents might have created a supportive environment that favoured open discussion on ARH issues. The intervention had a positive effect as regards the on the knowledge of both the parents and their adolescents because the parents in the EG have acquired knowledge on STI/HIV and AIDS; Communication skills; barriers to effective communication and how such barriers can be eliminated. The parents were trained on how to make friends with their adolescents. All the skills learn during the training intervention enable parent communicate effectively with their adolescents. With the knowledge gain about ARH issues, they are confident in discussing it with their adolescent since their knowledge was upgraded during the training programme as was indicated by the pre and post training evaluation.

5.2.5 Effectiveness of the Intervention

Effectiveness of the intervention is determined by the impact on the variables. The study design was able to compare the EG with CG considering the dependent variables viz the parents and adolescents' knowledge of ARH, frequency of communication between parents and adolescents, quality of communication and sexual practices.

5.2.5.1 Effects of the Intervention on knowledge of ARH

In this study, there was an improvement in knowledge of ARH issues for both the parents and adolescents at the EG and CG at post-intervention compared to the baseline. During the baseline, the knowledge was not significant for both the parents and the adolescents. At the follow-up, the increase was significant at EG compared with CG. However, knowledge of the

CG was also still high at post-intervention. The mean knowledge scores of the EG and CG at pre-test showed no significant difference from comparative analysis. At post-test however, the mean knowledge score of the EG, when compared with the CG, showed a significant difference. It could therefore be argued that the increase in knowledge among the EG was as a result of the training intervention. Other quasi-experimental studies also reported knowledge gain among the experimental group at post-test (Osiki, 2008; Eni-Olorunda, 2010; Karunwi, 2010 and Ojelade 2014). Comparison of mean knowledge scores at pre-test and post-test within the EG and CG showed a significant difference for the EG and this further strengthened the fact that knowledge gained in the EG was as a result of the training.

5.2.5.2 Effects of intervention on quality of ARH Communication

The intervention was observed to have had a significant effect on the ability of parents to freely discuss issues relating to ARH issues with their adolescents in this study. The proportion of those that ever had discussion on ARH with the parents increased at the follow-up in the EG whereby all adolescents said they had discussion with their parents compared with baseline whereas very few said they had that opportunity in the control. This was evidenced in the increase in frequency of communication between parents and the adolescents. Findings showed that at the end of six months interventions, higher proportion of the adolescents affirmed more satisfied with the content and duration of the discussion at the follow-up than at the baseline. This confirmed that the educational intervention programme might have created a supportive social environment that favoured open discussion on sensitive issues. During the training of parents, the participants however were equipped with knowledge that would enable them to communicate effectively with their adolescents. This aspect was conducted by a trained communication specialist and trainees had series of demonstrations.

This finding is in accordance with Maleta (2006) where majority of parents (74%) also admitted having had a sexual and reproductive health conversation with their children recently over the previous twelve months to the study. According to the study, majority of parents (96%) exposed their children to sex education at puberty. However, there was a large shift in the sex education providers from traditionally being extended parents to the biological parents/guardians in about 40% of the participants and parents' significant friends in about 19% Maleta (2006). The traditional sex education system has thus been modified. The SRH topics largely discussed were abstinence; delay of the sexual debut; HIV & AIDS; and

sexually transmitted infections (STIs). Topics least discussed were sexual partners; condoms and family planning (Maleta, 2006).

The findings are also in line with the study conducted by Bhana, Petersen, Mason, Mahintsho, Bell and McKay (2004) where the intervention group also showed significant improvement in their ability to engage in discussion about difficult or sensitive topics with their children in comparison to control group. Frequency of discussion also improved in the intervention group. Discussion about puberty increased from 55% to 69%, whilst discussion about sex, which was ranked most difficult to talk about, improved from 55% to 73% post-intervention (Bhana *et al.*, 2004). Also the finding was in agreement with what was documented by Vandenhoudt, Miller, Ochura, Wyckoff, Obong'o, Otwoma, Poulsen, Menten, Marum and Buve (2010) that there were improvements in sexual risk reduction communication, with increase from 17% to 38% baseline to follow-up of children reporting ever having asked their parent a question about sexuality. Similar change among parents was also reported (14% to 50% at follow-up). According to Dessie, Behane and Worku, 2015, adolescent-parent SRH communication was largely limited among adolescents who had poor behavioural beliefs, and poor subjective norms to communicate on sexual issues with the parent, and perceived the parents had poor SRH knowledge.

5.2.5.3 Effects of intervention on Adolescent Sexual Practices

The intervention through trained parents significantly impacted more effectively on the adolescents' knowledge and sexual behaviour as evidenced in the significant difference in knowledge scores in EG at the follow-up when compared with the CG which was not exposed to intervention. Based on the difference sexual experiences in EG and CG findings (see Table 4.46 and 4.47), there was a significant reduction in the proportion of adolescents that had sex experience in the six months preceding study in the two groups (EG and CG). The difference was not significant both at baseline and follow-up but there was a reduction in proportion of adolescents that engaged in sex practices in EG. This finding also corroborate the study of Odeleye and Ajuwon, 2015 where Parents' supervision played a major role in influencing the number of hours that students' spent on watching TV that exposes them to unhealthy messages.

This can be attributed to the film titled *"Ayegbeke"* that was shown during the training programme which revealed more to the parents that adolescents are facing enormous

reproductive health challenges. This shows that parents' intervention was effective and it also affirms that the intervention in the EG is better than no intervention at all in the CG. It also suggests that exposure to an intervention overtime will increase the retention of knowledge and consequently further influence positive sexual practices of the adolescents. Adolescents who communicate SRH matters with their parents less likely to engage in unsafe sex (Dessie et al, 2015)

According to Odeleye and Ajuwon, (2015) in a study on Influence of Exposure to Sexually Explicit Films on the Sexual Behaviour of Secondary School Students in Ibadan, Nigeria, Students whose parents did not monitor what they watched reportedly had heavy exposures to sexual contents on TV, when compared with those monitored. This shows a great role which parents can play to reduce exposures to harmful messages. The study further stressed that, monitoring of what students watched could be limited as a result of the type of profession/occupations that parents had. Most parents were business men and women and this type of occupation usually does not have a fixed start and close time like white collar jobs. Hence, there is little or no time for parents to consistently monitor the activities of their children (Odeleye and Ajuwon, 2015).

5.2.6 Increase in Knowledge in CG even without Intervention

The training intervention conducted in this study has had a positive impact on the knowledge, frequency and quality of communication, and sexual practices of those that participated in the research project and this was confirmed by the increase knowledge gains among the EG over the CG. Surprisingly there was a marginal increase in CG but not as much as the EG. These changes could have occurred as a result of many other community-based developmental programmes being conducted by the Government and Non-Governmental Organizations in many communities at the same time of the implementation of this study. Other organizations or institutions were in the community working and passing information across on the needs for people to be conscious of their health. Among these were religion institution, students from higher institution during their concurrent fieldwork and other health workers either from state or local government area.

Influence of mass media genres (radio and television) can also not be ruled out. They are available in the community transmitting messages to educate people on the transmission and prevention of HIV/AIDS, to go for HIV screening test and treatment. Some parents and

adolescents were inquisitive to know more about issues discussed during baseline survey. Some of them could have asked people around them who were working in related fields for clarification of ideas. A similar finding was documented by Akinbami, 2013 that documented the effect of educational interventions on the knowledge level on HIV education, self-efficacy to resist sexual pressure and safer sex behaviour among the female apprentices in Benin city. The apprentices in the experimental groups benefitted from the program as the increase in their knowledge was significantly higher than the control group.

The findings from the evaluation study should be interpreted with caution because it relies on the reported behaviour. Having become familiar with the questionnaire during the baseline gives people some comfort at the follow-up and therefore bringing about increase in positive behaviours or practices.

5.2.7 Outcome Evaluation at follow-up

The study sought to find out the extent to which the training intervention will have on knowledge of ARH issues, quality of communication and adolescent sexual practices among the participants. At follow-up, the outcome showed significant differences between the EG and CG except for the adolescent sexual practices where the differences was no significant different.

It was hypothesized that there will be a significant difference between adolescents' knowledge scores in EG than in CG at follow-up. Results of test of this hypothesis was sustained because the mean knowledge score for EG was significantly higher than that of CG at $p<0.0001$ (Table 4.49). Similarly, the results of test of this hypothesis involving parents' knowledge score was sustained because the mean knowledge score for EG was significantly higher than that of CG at $p<0.0001$ (Table 4.50).

At follow-up, EG showed significant differences in mean quality of communication compared with the CG (Table 4.51). Though there was a corresponding reduction in number from CG at follow which was significant. Again, the study recorded for EG an increase in mean quality of communication from baseline of 12.8±2.7 to 14.8±0.5 which was significant (Table 4.51). It was hypothesized that there will be a significant difference between mean quality of ARH communication before and after the intervention. The test of this hypothesis was sustained because the quality of communication improve for EG than what was observed for CG ($p<0.0001$).

The study hypothesized that intervention will produce better outcomes in respect of adolescent sexual practices in EG than in CG after intervention. From all indications and comparing the magnitude of changes derived for the two groups were not significant (p>0.0001). (Table 4.52). The results in this study represent test of the conceptual framework that guided the design and implementation of the study.

5.3 Implications of findings for Adolescent Reproductive Health issues

The home as a setting for health promotion and education is the basis of the health promoting community, which is one of most effective and efficient strategies a nation can use to prevent major health and social problems among adolescents. It is therefore pertinent that the parents are empowered and enabled to help themselves, community and adolescents take action about their health, based on an informed decision, which can be obtained through Health Promotion and Education trainings using interpersonal communication, counseling among others in health related matters.

Parents as potential educators for adolescent reproductive education are supposed to be enlightened citizens; therefore they ought to be trained to be knowledgeable in aspects of their pupils' health which includes their physical, mental, social and emotional wellbeing during their tender age. From this study however, some parents do not know their role as agents of ARH issues that can promote health, this therefore indicate the need for training intervention for parents. Parents require in-depth training if they would be trusted with the responsibility of delivering quality ARH education to their adolescents. This training intervention improved parents' knowledge and practice of discussing ARH issues with their adolescents.

The three major components of health promotion as identified by The National Health Promotion and Education policy and its strategic framework (FMOH, 2007a and FMOH, 2007b) are health education; service improvement and advocacy. Health education involves communication directed at individuals, families and communities to influence their awareness, knowledge, attitudes and skills. The training intervention adopted in this study provide rational basis for modifying existing health education activities designed for adolescents at community level and providing evidence for policy reform on adolescent reproductive health.

For the parents to be able to provide services as expected of them, they need to be a role model and good example to their children in addition to knowledge acquired. Combining the concepts of RH and Health Promotion, the need to use the components of health promotion to improve the RH of individuals becomes obvious in order to enable individuals increase control over their RH health and its determinants. More importantly, the services that the parents are to provide to their children are readily available once they had been trained because the children are living in their domain.

The study will enhance the health education profession by documenting the outcomes so that other professionals can use it to enhance parent-adolescent reproductive health. This study also provides empirical support for the theoretical framework applied in designing the intervention. Theoretical construct was used to design all aspect of the study including the design of training curriculum and training intervention.

Findings of this study revealed that there was good knowledge of ARH issues among few misconceptions and ARH issues at the baseline. Among the sources of information available to the adolescents included peers, school, it was observed that mass media and particularly the radio accounted for the most common source of information. This further strengthen the role of mass media in Health Promotion and Education because of its' ability to reach a large audience. Parents themselves don't see themselves as sources of ARH issues to their children. Public enlightening campaigns through the use of the mass media should be used to encourage parents on their role about the children.

5.4 Conclusion

The study has documented the effect of educational intervention on the knowledge and quality of ARH communication between parents and their adolescents. Both the adolescents and parents in the experimental groups benefitted from the programme as there was an increase in their knowledge which was significantly higher than that of the control group. The study also reveals the increase in frequency of communication between parents and adolescents and more parents initiated ARH communication with their adolescents. This has the potential for protecting the adolescents from contracting STIs and HIV/AIDS, and for prevention of unintended pregnancy. During the intervention period the parents in intervention groups acquired skills necessary for effective communication between parents and their adolescents

and factors promoting or inhibiting such communication. Despite the fact that the parents were trained on how to correctly fill the pictorial MIS form, few were still unable to fill it.

Many parents claimed they benefited from the training intervention conducted and supported the idea that parents should discuss ARH issues with their adolescents. The study finally has provided answers to the research questions which were drawn at the commencement of the research. The objective of the study was achieved and the hypotheses were tested.

5.5 Lessons Learnt

The following lessons were learnt from this study:

1. Parents have been proved to be effective in discussing ARH issues with their adolescents especially in an intervention programme. Nevertheless if provided with adequate training and supportive supervision, parents (especially mothers) can be used to implement intervention programme for their children;
2. The six months of intervention had a remarkable impact as the results show high significant difference over baseline and this could be sufficient. This suggests that exposure to an intervention overtime can increase retention of information and consequently influence positive behaviour;
3. A stipend to support participants' transportation was essential; this incentive was found to have increased the level of commitment and participation of the parents;
4. Contrary to the general belief that sexuality education may be counter-productive for young persons, the results obtained in this study confirm otherwise that intervention results in several positive outcomes (including increased ARH knowledge, frequency and quality of communication) for both parents and their adolescents;
5. For sustainability, the participants should be directly involved in planning and implementing programmes that are targeted at them; and
6. The parents were highly mobile and some re-located to another town. In conducting similar study, enough study participants need to be recruited and their contact collected.

5.6 Recommendations

This study was conducted among parents in peri-urban communities, similar study is thereby recommended among parents in urban towns so as to have information concerning their knowledge and effect the training will have on urban dwellers. Based on the study findings, other recommendations are made as follows:

1. It is evident that parents have a pivotal role to play in providing ARH information to their wards by equipping them with necessary information and skills; therefore, a scale-up of this training is hereby recommended;

2. Regular programmes targeting parents such as training and re-training of parents are needed to increase quality of parents-adolescents communication;

3. Use of social and mass media as methods of educating parents on Parent-Adolescent communication on ARH issues is recommended.

4. The outcome of this study provides evidence required to inform change in policy regarding adolescent reproductive health policy, thereby incorporating parent-child communication in adolescent reproductive health strategies.

5.7 Suggestions for Future Research

Based on the findings from this study, the following areas were suggested for future research:

1. Since the training intervention was not directed to the adolescents, there is also the need to conduct intervention research to test the effectiveness of training specifically targeting adolescents on factors inhibiting ARH communication between them and their parents; and

2. Qualitative research is needed to gain a greater understanding on the roles of fathers on Adolescent and Sexual and Reproductive health issue.

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Appendix Ia

FOCUS GROUP DISSCUSSION GUIDE FOR THE PARENTS

Greetings: My name is_____, a student in the Department of Health Promotion and Education, College of Medicine, University of Ibadan. I am carrying out a research aimed at determining the **Effect of Training Intervention on Knowledge and Frequency of Reproductive Health Communication between Parents and their Adolescents** in this area. My colleagues are _____. We are involving you in a brief group discussion relating to how parents communicate with their adolescents on adolescent reproductive issues. The discussion will not last long and we appeal to you to feel free to share your views with us. Please note that:

1. What we learn from you would be used to design appropriate educational programmes to promote parent-adolescent communication relating to adolescent reproductive health in this community. In this discussion,
2. We are not interested in what is right or wrong. What we needed are people's views, opinion, beliefs and general perceptions.
3. Please note that your participation is voluntary; feel free therefore to share your experiences and opinions with us.
4. All our discussion will be kept confidential. Your names are not required during the discussion and so do not mention your names or the names of your colleagues during the discussion.
5. In order not to forget the important experiences you will share with us and to capture everything we are to discuss, I take permission from you all to use a tape recorder.

Thank you.

SN	Key Questions	Probes/Follow-up questions
1.	Let us discuss the special needs, problems and worries of adolescents in this community.	i) Specific social needs and problems; **Probe into** -Dependency on others including parents -School dropout -behaviour which affect their health
		Which of the social needs or problems

		mentioned do you consider to be most serious and **why**?
		ii) Specific economics needs: **Probe into** -Lack of money -Unemployment/Under-employrnent -Lack of materials needed
		Which of these economics needs or problems is most serious and **why**?
2.	What are the sexual and other reproductive health related concerns, problems among adolescents in this community?	How common are the following problems or concerns among adolescent in this community? • STI • Types (**probe into the common among adolescent and why?**)
3.	a.) From where do adolescents in this community get information about health matters generally?	*Probe into typed of media; parents; relatives; peers etc if not mentioned. **Probe into** *Sources of information about - STIs
	b.) How do parents pass information about the following to their adolescent children? -Growth and development during puberty -STIs -Pregnancy prevention methods -Abortion prevention	**Probe for**: advise, referral to other people
4.	a.) Which issues do parents feel comfortable discussing with their adolescent children in this community?	* Specific reproductive health issues mothers feel comfortable discussing with (i) their daughters (ii) their sons * Specific reproductive health issues fathers feel comfortable discussing with

		(i) Sons (ii) Daughters
	b.) Let us discuss the reproductive issues which parents do not feel free to discuss with their adolescent children?	Probe into reproductive health issues which mothers do not feel free discussing with their (i) Sons (**probe for reasons also)** (ii) Daughters (**probe for reasons also**) * Probe into reproductive health issues which fathers do not feel free to discuss with their (i) Sons (**probe for reasons also**) (ii) Daughters (**probe for reasons also**)
	c.) What is the ideal age for parents to start discussing issues about STIs, Pregnancy prevention and abortion with their adolescent children?	Request for reasons for the preferred age for doing so with their **sons** and **daughters**
	d.) What are the factors, circumstances, events or behaviours that prompt or motivate parents to start discussing reproductive health matters with their adolescent children?	Request them to discuss factors that motivates (i) Mothers to start discussing with a. Daughters b. Sons (ii) Fathers a. Daughters b. Sons **Probe for** religious and socio-cultural factors
	e.) What are the factors that serve as barriers to the discussion of sexual, pregnancy prevention and abortion) with children among parents	**Lead them to discuss** * Inhibiting factors among mothers * Inhibiting factors among fathers
5.	What are the circumstances, events, behaviour etc that make parents to start discussing STIs, Pregnancy	**Probe for specific behaviour among** - Boys - Girls

	prevention and abortion related matters with their children?	
6.	In your opinion, who do adolescents prefer to be discussing sexual, pregnancy prevention and abortion matter with. **Probe for those preferred by** - Boys - Girls	**Probe** for reasons behind their preferred choices
7.	What are the special ways for teaching or motivating parents to be discussing issues about STI, pregnancy prevention and Abortion matters with their adolescent children?	**Probe for use of the following:** -Training -Film show -Peer education -Imam -Pastor -Health workers etc
8.	a.) What do parents need to be taught to enable them to be discussing issues relating to sex, pregnancy prevention and abortion with their adolescents?	
	b.) What do adolescents need to be taught to enable them to be discussing issues relating to sex, pregnancy prevention and abortion with their parents?	
Thank you for taking the time to participate in this discussion.		

Appendix 1b

FOCUS GROUP DISSCUSSION GUIDE FOR THE ADOLESCENTS

Greetings: My name is_____, a student in the Department of Health Promotion and Education, College of Medicine, University of Ibadan. I am carrying out a research aimed at determining the **Effect of Training Intervention on Knowledge and Frequency of Reproductive Health Communication between Parents and their Adolescents in two Communities of Oyo State** in this area**.** My colleagues are _____. We are involving you in a brief group discussion relating to how parents communicate with their adolescents on adolescent reproductive issues. The discussion will not last long and we appeal to you to feel free to share your views with us. Please note that:

1. What we learn from you would be used to design appropriate educational programmes to promote parent-adolescent communication relating to adolescent reproductive health in this community. In this discussion,
2. We are not interested in what is right or wrong. What we needed are people's views, opinion, beliefs and general perceptions.
3. Please note that your participation is voluntary; feel free therefore to share your experiences and opinions with us.
4. All our discussion will be kept confidential. Your names are not required during the discussion and so do not mention your names or the names of your colleagues during the discussion.
5. In order not to forget the important experiences you will share with us and to capture everything we are to discuss, I take permission from you all to use a tape recorder.

Thank you.

SN	Key Questions	Probes/Follow-up questions
1.	Let us discuss the special needs, problems and worries of adolescents in this community.	i) Specific social needs and problems; **Probe into** -Dependency on others including parents -School dropout -behaviour which affect their health
		Which of the social needs or problems

		mentioned do you consider to be most serious and **why**?
		ii) Specific economics needs: **Probe into** -Lack of money -Unemployment/Under-employrnent -Lack of materials needed
		Which of these economics needs or problems is most serious and **why**?
2.	What are the sexual and other reproductive health related concerns, problems among adolescents in this community	How common are the following problems or concerns among adolescent in this community? • STI • Types (**probe into the common among adolescent and why?**)
3.	a.) From where do adolescents in this community get information about health matters generally?	*Probe into typed of media; parents; relatives; peers etc if not mentioned. **Probe into** *Sources of information about - STIs
	b.) How do parents pass information about the STI to the adolescent children in this community by parents	**Probe into** - Frequency - Duration -Contents of the discussion -STI commonly discussed
	c.) How do parents pass information about the following to their adolescent children? -Growth and development during puberty -STIs -Pregnancy prevention methods -Abortion prevention	Which methods parents use to pass across information about Growth and development during puberty, STI, Pregnancy prevention and abortion to adolescent children **Probe for**: advise, referral to other people
4.	a.) Which issues do parents feel comfortable discussing with their adolescent children in this community?	* Specific reproductive health issues mothers feel comfortable discussing with (i) their daughters (ii) their sons * Specific reproductive health issues fathers

		feel comfortable discussing with (i) Sons (ii) Daughters
	b.) Let us discuss the reproductive issues which parents do not feel free to discuss with their adolescent children?	Probe into reproductive health issues which mothers do not feel free discussing with their (i) Sons (**probe for reasons also)** (ii) Daughters (**probe for reasons also**) * Probe into reproductive health issues which fathers do not feel free to discuss with their (i) Sons (**probe for reasons also**) (ii) Daughters (**probe for reasons also**)
	c.) What is the ideal age for parents to start discussing issues about STIs, Pregnancy prevention and abortion with their adolescent children?	Request for reasons for the preferred age for doing so with their **sons** and **daughters**
	d.) What are the factors, circumstances, events or behaviours that prompt or motivate parents to start discussing reproductive health matters with their adolescent children?	Request them to discuss factors that motivates (i) Mothers to start discussing with a. Daughters b. Sons (ii) Fathers a. Daughters b. Sons **Probe for** religious and socio-cultural factors
	e.) What are the factors that serve as barriers to the discussion of sexual, pregnancy prevention and abortion) with children among parents	**Lead them to discuss** * Inhibiting factors among mothers * Inhibiting factors among fathers
5.	What are the circumstances, events, behaviour etc that make parents to start discussing STIs, Pregnancy prevention and abortion related	**Probe for specific behaviour among** - Boys - Girls

	matters with their children	
6.	In your opinion, who do adolescents prefer to be discussing sexual, pregnancy prevention and abortion matter with. **Probe for those preferred by** - Boys - Girls	**Probe** for reasons behind their preferred choices
7.	a.) How do adolescents feel discussing RH e.g. STI, pregnancy prevention with their parents?	
	b.) What do you think can be done to improve adolescent ability to be discussing RH issues with their parents?	Which of the following reproductive health issues should adolescents discuss with their parents? - STIs, - Pregnancy prevention
8.	What are the special ways for teaching or motivating adolescents to be discussing issues about STI, pregnancy prevention and Abortion matters with their adolescent children? **Probe for use of the following:** -Training -Film show -Peer education -Imam -Pastor -Health workers etc	
9.	a.) What do parents need to be taught to enable them to be discussing issues relating to sex, pregnancy prevention and abortion with their adolescents?	
	b.) What do adolescents need to be taught to enable them to be discussing issues relating to sex, pregnancy prevention and abortion with their parents?	
Thank you for taking the time to participate in this discussion.		

Yoruba

Appendix Ia

FOCUS GROUP DISSCUSSION GUIDE FOR THE PARENTS
(ATONA FUN IFOROJOMITORO ORO LARIN AWON OBI)

Ikinni: Oruko mi ni _____ akeko ni isori idanileko nipa igbelaruge eto ilera ati kiko ni re, Ile-eko ti Isegun-oyinbo, ti Yunifasiti Ibadan. Mo n iwadi toni afojusun lori Ipa ti Didanileko lori imo ati ojugba osoropo lori ilera toromo ibimo larin awon obi ati awon odolangba won in agbegbe yii. Awon olubakegbe mi nii _____, _____. Ahun mu yin darapo ninu kikopa fun igba ranpe ninu iforojomitoro or alajoso to nise pelu bawo ni awon obi se ma n soropo pelu awon odolangba won lori oro sere ife to n yi dande si bibimo awon adolangba. Iforojomitor oro yii konipe loo titi asi n royin pe ki e tuyaya - ki e tuyaya lati sajopin ero yin pelu wa. Ejowo afe kodi mimo si yin pe:

1. ohun ti a n koo lati odo yin yoo wulo fun gbigbese lati seto topeye fun awon igbekale idanileko to n se igbelaruge isoropapo obi si odolangba to nise pelu ilera toromo bibimo dolangba in awujo yii. Ninu iforwero yii.
2. Akoni n kanse pelu boya idahun yin dara tabi kodara. Ohun ti afe ni afojuwo awon olukopa, ero, igbagbo, ati akiyesi lapapo.
3. Ejowo kodi mimo fun yin pe kikopa yin je atinuwa. Fun dii eyi e turaka ki e si wa lominira lati se alabapin awon iriri yin ati ero pelu wa.
4. Gbogbo awon oro ajoso wa ni yoo wa ni bonkele. A ko beere oruko yin lakoko iforojomitoro oro yii fun di eyi, e ma daruko yin tabi oruko akin egbe yin lakoko isoropo.
5. Kii a maba gbagbe awon iriri patakii ti e fe se alabapin pelu wa ki a si file ri ohungbogbo ti a o soo kojopo, e gbawa laye lati loo ero igbohun sile.

Ese adupe.

S/N	Key Questions Ibeere Gbogi	Probes/Follow-up questions Sebeere/Ibeere onitelentele
1.	Let us discuss the special needs, problems and worries of adolescents in this community.	i) Specific social needs and problems; Probe into - Dependency on others including parents

	Eje ka sasaro lori awon aferi/aini tosepataki, isoro/adojuko ati awon aniyan awon odolangba ni awujo yii.	- School dropout - behaviour which affect their health Awon aini ati idojuko nipa ibagbepo; Sebeere lori - Igbojule awon eniyan miran pelupelu awon obi - Ikeko abo - Wiwuwa too le taba ilera
		Which of the social needs or problems mentioned do you consider to the most serious and why? Ewo ninu awon aini tabi idojuko ti e so nipa re yii ni e rope o gba amojuto ju ati kiini idi?
		ii) Specific economics needs: Probe into -Lack of money -Unemployment/Under-employment -Lack of materials needed - Aini ti eto isuna: Sebeeresi - Aisi owo - Ainise/sise ti o poju osuwon - Aini ohun elo too ye
		Which of these economics needs or problems is most serious and why? Ewo ninu awon aini ti isuna tabi idojuko yii ni o gbaamojuto ju ati kini idi?
2.	What are the sexual and other reproductive health related concerns, problems among adolescents in this community?	How common are the following problems or concerns among adolescent in this community? • STI

		• Types (probe into the common among adolescent and **why?**)
	Awon kiini aniyan, idojuko too farape ibalopo ati awon ohun miran too jomo ilera toromo bibimo larin odolangba ni awujo yii?	Bawo ni awon idojuko tabi aniyan won yii se gbinle larin awon odolangba awujo yii? • Iru awon kokoro naa (sebeere sii awon eyi to gbinleya/wopo larin awon odolangba ati idii)
3.	a.) From where do adolescents in this - community get information about health matters generally?	* Probe into typed of media; parents; relatives; peers etc if not mentioned. **Probe into** * Sources of information about - STIs
	Nibo ni awon adolangba awujo yii ti ma n gbo iro/iroyin nipa ohun tojomo ilera lapapo?	Sebeere sii iru eto iroyin; todo obi; ara/ibatan; ogba/egbe bbl. Ti won ko ba menu baa. Sebeere sii * Orisun iroyin nipa - Kokoro arun nipase ibalopo
	b.) How do parents pass information about the following to their adolescent children? -Growth and development during puberty	**Probe** for: advise, referral to other people
	b.) Bawo ni awon obi se ma n se ifitonileti nipa awon iroyin yii pelu awon odomode? - Gbigberu ati idagbasoke iyipada awon eya ara diti odo -STIs -Pregnancy prevention methods	**Sebeere** fun: imoran, didari eniyan losi ibomiran fun itoju

	-Abortion prevention - Kokoro arun nipase ibalopo - Awon ona nipa idena oyun nini -Didena siseyun	
	a.) Which issues do parents feel comfortable discussing with their adolescent children in this community? Iru awon ijiroro wo ni awon obi ma n turaka/farabale lati so pelu awon odomade won ni awujo yii?	* Specific reproductive health issues mothers feel comfortable discussing with (i) their daughters (ii) their sons * Specific reproductive health issues fathers feel comfortable discussing with (i) Sons (ii) Daughters * Oro lori ilera ti bibimo to sepato to awon mama ma n farabale so pelu (i) awon omobirin won (ii) awon omokunrin won * Oro lori ilera ti bibimo to sepato to awon baba ma n farabale so pelu (i) awon omobirin won (ii) awon omokunrin won
	b.) Let us discuss the reproductive issues which parents do not feel free to discuss with their adolescent children? Eje kaso nipa ohun to jemo bibimo/ibisi ti awon obi kiile fi gbogbo enu so pelu awon odomode	Probe into reproductive health issues which mothers do ot feel free discussing with their (i) Sons **(probe for reasons also)** (ii) Daughters **(probe for reasons also)** * Probe into reproductive health issues which fathers do not feel free to discuss with their (i) Sons **(probe for reasons also)** (ii) Daughters **(probe for reasons also)** * Sebeere sii oro ilera toromo bibimo ti awon iya/mama kii feso pelu (i) awon omokunrin (se wadi fun idi pelu)

	won?	(ii) awon omobirin (se wadi fun idi pelu) * Sebeere sii oro ilera toromo bibimo ti awon iya/mama kii feso pelu (i) awon omokunrin (se wadi fun idi pelu) (ii) awon omobirin (se wadi fun idi pelu)
	c.) What is the ideal age for parents to start discussing issues about STIs, Pregnancy prevention and abortion with their adolescent children? Ojo-ori wo loye ki odomode pe ki obi to le ma ba sasaro po lori oro to jomo Kokoro arun nipase ibalopo, Idena oyun nini ati Didena siseyun	Request for reasons for the preferred age for doing so 4th their **sons** and **daughters** Roo won lati so idi fun ojo ori ti obi faramo lati ma so irufe oro bee pelu **awon omokunrin** ati **awon omobirin**
	d.) What are the factors, circumstances, events or behaviours that prompt or motivate parents to start discussing reproductive health matters with their adolescent children? d) Kiini awon ohun sise, isele tabi iwuwasi, to man taa obi kan tabi ru won soke lati bere fifiorojomitoro lori ilera toromo ibimo pelu awon omo won?	Request them to discuss factors that motivates (i) Mothers to start discussing with a. Daughters b. Sons (ii) Fathers Daughters Sons **Probe for** religious and socio-cultural factors Roo won lati soro lori n kan irunisoke (i) Awon iya lati bere ibajiroro pelu a. Awon Omobirin b. Awon Omokunrin (ii) Awon baba a) Awon Omobirin b) Awon Omokunrin
	e.) What are the factors that serve as barriers to the discussion of sexual, pregnancy prevention and abortion with children among parents	**Lead them to discuss** * Inhibiting factors among mothers * Inhibiting factors among fathers

	Awon nkan woni oduro gegebi idanilowoko si iforojomitoro oro lori ibalopo, idena oyun nini ati siseyun pelu omo larin awon obi	Mu won lo sinu iforojomitoro oro lori * Awon ifanfa-abehinyo larin awon iya * Awon ifanfa-abehinyo larin awon baba
5.	What are the circumstances, events. behaviour etc that make parents to start discussing STIs, Pregnancy prevention and abortion related matters with their children? Kiini awon ohun sise, isele, iwuwasi, ati beebee loo (bbl) to man mu ki obi bere fifiorojomitoro to jomo Kokoro arun nipase ibalopo, pelu awon omo won	**Probe for specific behaviour among** - Boys - Girls Sebeere fun awon iwuwasi sansan/pato larin - Awon Okunrin - Awon Obirin
6.	In your opinion, who do adolescents prefer to be discussing sexual, pregnancy prevention and abortion matter with. Probe for those preferred by - Boys - Girls Ni ero ti yin, tani awon odolangba feran lati ma ba sajoro po nipa ohuntojo ibalopo, idena oyun nini ati oyun sise . Sebeere fun eniti kikokan won yii yanlayo/ faramo - Awon Okunrin - Awon Obirin	**Probe** for reasons behind their preferred choices Sebeere fun awon idi to wa lehin irufe yi

7.	What are the special ways for teaching or motivating parents to be discussing issues about STI, pregnancy prevention and Abortion matters with their adolescent children? Awon ona patakii wo ni a le fi ma ko tabi ru awon obi soke lati le ma se iforojomitoro lori awon nkan nipa kokoro arun nipase ibalopo, pelu awon odomode won	Probe for use of the following: - Training - Film show - Peer education - Imam - Pastor - Heath workers etc Sebeere lori lilo awon won yi: - Idanileko - Ire itage/ere onise - Kikoni elegbejegbe - Imamu - Alufa/pasito - Awon osise eto ilera bbl.
8.	a.) What do parents need to be taught to enable them to be discussing issues relating to sex, pregnancy prevention and abortion with their adolescents? a) Kinni awon obi nilo lati je kii won le ma ba awon odo langba won jiroro lori awon ohun tio je mo ipalopo, didena oyun nini ati iseyun.	
	b.) What do adolescents need to be taught to enable them to be discussing issues relating to sex, pregnancy prevention and abortion with their parents? b.) Kinni awon odo langba nilo lati le je kii won ma ba awon obi won jiroro lori ohun ti o je mo ibalopo, idena oyun nini ati oyun sise.	
Thank you for taking the time to participate in this discussion. **E se fun fifi akoko yin sile lati kopa ninu ijiroro yii.**		

Appendix Ib

FOCUS GROUP DISSCUSSION GUIDE FOR THE ADOLESCENTS
(ATONA FUN IFOROJOMITORO ORO LARIN AWON ODO)

Ikinni: Oruko mi ni _____ akeko ni isori idanileko nipa igbelaruge eto ilera ati kiko ni re, Ile-eko ti Isegun-oyinbo, ti Yunifasiti Ibadan. Mo n iwadi toni afojusun lori Ipa ti Didanileko lori imo ati ojugba osoropo lori ilera toromo ibimo larin awon obi ati awon odolangba won in agbegbe yii. Awon olubakegbe mi nii _____, _____. Ahun mu yin darapo ninu kikopa fun igba ranpe ninu iforojomitoro or alajoso to nise pelu bawo ni awon obi se ma n soropo pelu awon odolangba won lori oro sere ife to n yi dande si bibimo awon adolangba. Iforojomitor oro yii konipe loo titi asi n royin pe ki e tuyaya - ki e tuyaya lati sajopin ero yin pelu wa. Ejowo afe kodi mimo si yin pe:

6. ohun ti a n koo lati odo yin yoo wulo fun gbigbese lati seto topeye fun awon igbekale idanileko to n se igbelaruge isoropapo obi si odolangba to nise pelu ilera toromo bibimo dolangba in awujo yii. Ninu iforwero yii.
7. Akoni n kanse pelu boya idahun yin dara tabi kodara. Ohun ti afe ni afojuwo awon olukopa, ero, igbagbo, ati akiyesi lapapo.
8. Ejowo kodi mimo fun yin pe kikopa yin je atinuwa. Fun dii eyi e turaka ki e si wa lominira lati se alabapin awon iriri yin ati ero pelu wa.
9. Gbogbo awon oro ajoso wa ni yoo wa ni bonkele. A ko beere oruko yin lakoko iforojomitoro oro yii fun di eyi, e ma daruko yin tabi oruko akin egbe yin lakoko isoropo.
10. Kii a maba gbagbe awon iriri patakii ti e fe se alabapin pelu wa ki a si file ri ohungbogbo ti a o soo kojopo, e gbawa laye lati loo ero igbohun sile.

Ese adupe.

S/N	**Key Questions** **Ibeere Gbogi**	**Probes/Follow-up questions** **Sebeere/Ibeere onitelentele**
1.	Let us discuss the special needs, problems and worries of adolescents in this community.	i) Specific social needs and problems; Probe into - Dependency on others including parents - School dropout - behaviour which affect their health

	Eje ka sasaro lori awon aferi/aini tosepataki, isoro/adojuko ati awon aniyan awon odolangba ni awujo yii.	Awon aini ati idojuko nipa ibagbepo; Sebeere lori - Igbojule awon eniyan miran pelupelu awon obi - Ikeko abo - Wiwuwa too le taba ilera
		Which of the social needs or problems mentioned do you consider to the most serious and why? Ewo ninu awon aini tabi idojuko ti e so nipa re yii ni e rope o gba amojuto ju ati kiini idi?
		ii) Specific economics needs: Probe into -Lack of money -Unemployment/Under-employment -Lack of materials needed - Aini ti eto isuna: Sebeeresi - Aisi owo - Ainise/sise ti o poju osuwon - Aini ohun elo too ye
		Which of these economics needs or problems is most serious and why? Ewo ninu awon aini ti isuna tabi idojuko yii ni o gbaamojuto ju ati kini idi?
2.	What are the sexual and other reproductive health related concerns, problems among adolescents in this community? Awon kiini aniyan, idojuko too	How common are the following problems or concerns among adolescent in this community? • STI • Types (probe into the common among adolescent and **why?**) Bawo ni awon idojuko tabi aniyan won yii se

	farape ibalopo ati awon ohun miran too jomo ilera toromo bibimo larin odolangba ni awujo yii?	gbinle larin awon odolangba awujo yii? • Iru awon kokoro naa (sebeere sii awon eyi to gbinleya/wopo larin awon odolangba ati idii)
3.	a.) From where do adolescents in this - community get information about health matters generally? Nibo ni awon adolangba awujo yii ti ma n gbo iro/iroyin nipa ohun tojomo ilera lapapo?	* Probe into typed of media; parents; relatives; peers etc if not mentioned. **Probe into** * Sources of information about - STIs Sebeere sii iru eto iroyin; todo obi; ara/ibatan; ogba/egbe bbl. Ti won ko ba menu baa. Sebeere sii * Orisun iroyin nipa - Kokoro arun nipase ibalopo
	b.) How do parents pass information about the following to their adolescent children? -Growth and development during puberty b.) Bawo ni awon obi se ma n se ifitonileti nipa awon iroyin yii pelu awon odomode? - Gbigberu ati idagbasoke iyipada awon eya ara diti odo -STIs -Pregnancy prevention methods -Abortion prevention - Kokoro arun nipase ibalopo - Awon ona nipa idena oyun nini	**Probe** for: advise, referral to other people **Sebeere** fun: imoran, didari eniyan losi ibomiran fun itoju

	-Didena siseyun	
	a.) Which issues do parents feel comfortable discussing with their adolescent children in this community? Iru awon ijiroro wo ni awon obi ma n turaka/farabale lati so pelu awon odomade won ni awujo yii?	* Specific reproductive health issues mothers feel comfortable discussing with (i) their daughters (ii) their sons * Specific reproductive health issues fathers feel comfortable discussing with (i) Sons (ii) Daughters * Oro lori ilera ti bibimo to sepato to awon mama ma n farabale so pelu (i) awon omobirin won (ii) awon omokunrin won * Oro lori ilera ti bibimo to sepato to awon baba ma n farabale so pelu (i) awon omobirin won (ii) awon omokunrin won
	b.) Let us discuss the reproductive issues which parents do not feel free to discuss with their adolescent children? Eje kaso nipa ohun to jemo bibimo/ibisi ti awon obi kiile fi gbogbo enu so pelu awon odomode won?	Probe into reproductive health issues which mothers do ot feel free discussing with their (i) Sons **(probe for reasons also)** (ii) Daughters **(probe for reasons also)** * Probe into reproductive health issues which fathers do not feel free to discuss with their (i) Sons **(probe for reasons also)** (ii) Daughters **(probe for reasons also)** * Sebeere sii oro ilera toromo bibimo ti awon iya/mama kii feso pelu (i) awon omokunrin (se wadi fun idi pelu) (ii) awon omobirin (se wadi fun idi pelu) * Sebeere sii oro ilera toromo bibimo ti awon

		iya/mama kii feso pelu (i) awon omokunrin (se wadi fun idi pelu) (ii) awon omobirin (se wadi fun idi pelu)
	c.) What is the ideal age for parents to start discussing issues about STIs, Pregnancy prevention and abortion with their adolescent children? Ojo-ori wo loye ki odomode pe ki obi to le ma ba sasaro po lori oro to jomo Kokoro arun nipase ibalopo, Idena oyun nini ati Didena siseyun	Request for reasons for the preferred age for doing so 4th their **sons** and **daughters** Roo won lati so idi fun ojo ori ti obi faramo lati ma so irufe oro bee pelu **awon omokunrin** ati **awon omobirin**
	d.) What are the factors, circumstances, events or behaviours that prompt or motivate parents to start discussing reproductive health matters with their adolescent children? d) Kiini awon ohun sise, isele tabi iwuwasi, to man taa obi kan tabi ru won soke lati bere fifiorojomitoro lori ilera toromo ibimo pelu awon omo won?	Request them to discuss factors that motivates (i) Mothers to start discussing with a. Daughters b. Sons (ii) Fathers Daughters Sons **Probe for** religious and socio-cultural factors Roo won lati soro lori n kan irunisoke (iii)Awon iya lati bere ibajiroro pelu c. Awon Omobirin d. Awon Omokunrin (iv)Awon baba c) Awon Omobirin d) Awon Omokunrin
	e.) What are the factors that serve as barriers to the discussion of sexual, pregnancy prevention and abortion with children among parents	**Lead them to discuss** * Inhibiting factors among mothers * Inhibiting factors among fathers

	Awon nkan woni oduro gegebi idanilowoko si iforojomitoro oro lori ibalopo, idena oyun nini ati siseyun pelu omo larin awon obi	Mu won lo sinu iforojomitoro oro lori * Awon ifanfa-abehinyo larin awon iya * Awon ifanfa-abehinyo larin awon baba
5.	What are the circumstances, events. behaviour etc that make parents to start discussing STIs, Pregnancy prevention and abortion related matters with their children? Kiini awon ohun sise, isele, iwuwasi, ati beebee loo (bbl) to man mu ki obi bere fifiorojomitoro to jomo Kokoro arun nipase ibalopo, pelu awon omo won	**Probe for specific behaviour among** - Boys - Girls Sebeere fun awon iwuwasi sansan/pato larin - Awon Okunrin - Awon Obirin
6.	In your opinion, who do adolescents prefer to be discussing sexual, pregnancy prevention and abortion matter with. Probe for those preferred by - Boys - Girls Ni ero ti yin, tani awon odolangba feran lati ma ba sajoro po nipa ohuntojo ibalopo, idena oyun nini ati oyun sise . Sebeere fun eniti kikokan won yii yanlayo/ faramo - Awon Okunrin - Awon Obirin	**Probe** for reasons behind their preferred choices Sebeere fun awon idi to wa lehin irufe yi

7.	What are the special ways for teaching or motivating parents to be discussing issues about STI, pregnancy prevention and Abortion matters with their adolescent children? Awon ona patakii wo ni a le fi ma ko tabi ru awon obi soke lati le ma se iforojomitoro lori awon nkan nipa kokoro arun nipase ibalopo, pelu awon odomode won	Probe for use of the following: - Training - Film show - Peer education - Imam - Pastor - Heath workers etc Sebeere lori lilo awon won yi: - Idanileko - Ire itage/ere onise - Kikoni elegbejegbe - Imamu - Alufa/pasito - Awon osise eto ilera bbl.
8.	a.) What do parents need to be taught to enable them to be discussing issues relating to sex, pregnancy prevention and abortion with their adolescents? a) Kinni awon obi nilo lati je kii won le ma ba awon odo langba won jiroro lori awon ohun tio je mo ipalopo, didena oyun nini ati iseyun.	
	b.) What do adolescents need to be taught to enable them to be discussing issues relating to sex, pregnancy prevention and abortion with their parents? b.) Kinni awon odo langba nilo lati le je kii won ma ba awon obi won jiroro lori ohun ti o je mo ibalopo, idena oyun nini ati oyun sise.	
Thank you for taking the time to participate in this discussion. **E se fun fifi akoko yin sile lati kopa ninu ijiroro yii.**		

Appendix IIa

Baseline Questionnaire for Parents

Effect of Training Intervention on Knowledge and Reproductive Health Communication between

Parents and their Adolescents Children in two Communities of Oyo State

Greetings: My name is_____, a student in the Department of Health Promotion and Education, College of Medicine, University of Ibadan. We are conducting a research project to determine the

Effect of Training Intervention on Knowledge and Frequency of Reproductive Health Communication between Parents and their Adolescents in this area. Adolescents are considered to be children in the group 10-19 years. I am here to learn from you and would be very glad if you can spare me some minutes to share your experiences with me. Please feel free to share your beliefs and opinions with me. All our discussion will be kept confidential and would be used to design appropriate intervention programme to promote parent-adolescent communication relating to adolescent reproductive health in this community. We also want to assure you that names are not required during this interview. Thanks for your anticipated co-operation.

LGA NAME:_____ SN_____

SECTION A – Socio-Demographic Characteristics

Instruction: Kindly provide answer to the following questions about yourself by ticking (✓) the alternative answers you think are appropriate in line with your views.

1. What is your age as at last birthday_____(*Actual age or year of birth?*)
2. Role in the family 1. Father [ ] 2. Mother [ ]
3. Ethnic group 1. Yoruba [ ] 2. Hausa [ ] 3. Igbo [ ] 4. Others (specify)_____
4. Religion 1. Christianity [ ] 2. Islam [ ] 3. Traditional [ ] 4. Others (specify _____)

5. Highest level of Education 1. No formal education [ ] 2. Primary education [ ] 3. Secondary education [ ] 4. Vocational [ ] 5. Tertiary education [ ] 1= NCE [ ] 2=OND [ ] 3=HND [ ] 4=University [ ]
6. Occupation 1. Civil servant [ ] 2. Trading [ ] 3 Artisan [ ] 4. Farming [ ] 5 Housewife [ ] 6. Labourer/cleaner [ ] 7. Self-employed [ ] 8. Others (Specify___)
7. What is your marital status? 1. Married [ ] 2. Widowed [ ] 3.Widower [ ] 4 Never married [ ] 5. Divorced [ ] 6. Separated [ ] (*Ask Q8 if married only*)
8. (*For married only*) what is your type of marriage 1. Monogamy [ ] 2. Polygyny [ ]
9. Are the whole family (husband, wife (vies) and children) living together in the same house/apartment? 1. Yes [ ] 2. No [ ]
10. How long have you been married? _____
11. Are you living with your husband/wife and children in the same house? 1. Yes [ ] 2. No [ ]

12a. How many children do you have?_____(Put actual number).

12b. Number of Males _____ Number of Females_____(Put actual number).

13. How many children do you have who are between the ages of 10-19 years?_____ How many are boys_____How many are girls_____
14. Are you living together with your adolescent children in the same house? 1. Yes [ ] 2. No [ ]

SECTION B: Knowledge of Adolescent Reproductive Health

15. Which of the following ways can adolescents use for the prevention of pregnancy? You can tick (√) more than one you considered correct.

SN	Ways or means of pregnancy prevention	True	False
1.	Abstaining from sexual intercourse		
2.	Use of traditional ring		
3.	Using condom for every act of sexual intercourse		
4.	Having sexual intercourse only during safe period		
5.	Use of any modern methods of contraceptives		
6.	Use of traditional bead		
7.	Avoiding casual sex		

16. Have you ever heard of HIV/AIDS? 1. Yes [ ] 2.No [ ] (*If No go to Q 25*)
17a. Do you think it is possible for adolescent children age 10-19 to get HIV/AIDS?

1. Yes [ ] 2.No [ ]

17b. If Yes, please explain how_____

17c. If No, please explain why_____

18. Is it possible to prevent HIV/AIDS among adolescent? 1. Yes [ ] 2. No [ ]

19. Which of the following is True or False about how to avoid getting Sexually Transmitted Infections?

SN	Statements	True	False
1.	Abstaining from sex completely		
2.	Being faithful to one partner		
3.	Avoiding casual sex		
4.	Using condom for every act of sexual intercourse		
5.	Avoiding commercial sex workers		
6.	Not sharing blade		
7.	Not sharing toilets, comb or clothes		
8.	Not sharing eating plates or utensils		

20. Mention 3 modes of transmission of HIV *(Don't the read options, tick as mentioned).*

1. Sexual intercourse with infected person [ ] 2. Mother-to-Child transmission [ ]
3. Through contaminated blood transfusion [ ] 4. Sharing of sharp object such as razor blade/knife [ ] 5._____ 6._____

21. Mention 3 potential health risks or problem associated with early pregnancy among adolescents *(Don't the read options, tick as mentioned).*

1. Contacting diseases including HIV/AIDS and STDs [ ] 2. Genital fistulae [ ]
3. Maternal mortality [ ] 4. Infertility [ ] 5. Cervical cancer [ ] 6. Caesarian delivery [ ]

22. Please indicate whether True or False to the following statements

	Knowledge Statements	True	False
1.	Puberty marks the beginning of sexual maturity		
2.	Puberty starts earlier in girls than boys		
3.	Girls aged 10-14 years who experience menstruation cannot become pregnant because they are too young		
4.	Attraction towards opposite sex is normal at puberty		
5.	It is possible for male adolescent to impregnate a girl		

6.	Adolescents who don't have sex occasionally are sexually unhealthy		
7.	Not having sex at all or not having sex occasionally can lead to sickness for boys		
8.	Not having sex at all or not having sex occasionally can lead to sickness for girls		

23. Some parents like you often say the following statement about adolescent reproductive health for each, indicate whether you Agree, Disagree, or Not Sure about each of the following statements with it.

Statements	Agree	Disagree	Not Sure
1. A girl should have sex before she gets married			
2. A boy should have sex before he gets married			
3. Unmarried young people who have started having sex should use a contraceptive method to avoid pregnancy			
4. Young people's knowledge of contraceptive encourages them to have sex with many people			
5. Discussing RH issues with adolescent can make them sexually promiscuous.			
6. Parents should be discussing ARH issues with their adolescent children			
7. Adolescent should never be exposed to ARH issues.			
8. Parents should be confident in discussing RH issues with their adolescents			
9. Young people's knowledge of contraceptive encourages them to have sex without fear of pregnancy			

SECTION C: PATTERNS OF COMMUNICATION BETWEEN PARENT AND ADOLESCENTS

24. Have you ever discussed ARH issues with any of your adolescent children?

1. Yes [ ] 2. No [ ] (*If No, go to Question 44*)

25a. If Yes, when was the last time you discussed ARH issues with your adolescent children? 1. Yesterday [ ] 2. Today [ ] 3. Last week [ ] 4.Two week's ago [ ] 5. Last Month [ ] 6. Can't remember [ ] 7. Others_____

25b. How often do you discussed ARH issues with your adolescent children? 1. Once in a week [ ] 2. Twice a week [ ] 3. Once in a month [ ] 4. Twice a month [ ] 5. Once in three months [ ] 6. Other specify_____

26. What situations made you discuss the ARH information with your children the last time you did so? _____

27. What did you discuss with your adolescent child the last time you did so? _____

28. Who initiated or encouraged the discussion on ARH? 1. Myself [ ] 2. My adolescent child [ ] 3. My spouse [ ] 4. My Neighbour [ ] 5. Others specify_____

29a. At what age do you think is the best time to start discussion about RH with an adolescent for male?_____

29b. At what age do you think is the best time to start discussion about RH with an adolescent for female?_____

30a. Give reasons for the age given by you for male _____

30b. Give reasons for the age given by you for female_____

31. Have you ever requested someone to discuss RH issues with your adolescent? 1. Yes [ ] 2. No [ ] (*If No, go to Question 34*)

32. If Yes, can you mention who was involved? (*i.e. in terms of relationship to you*) _____

33. If yes to question 31, why did you request someone else to discuss RH with your children _____

34. At what time do you discuss ARH with them? (*Can tick (√) as many as possible*) 1. After school / Day's work [ ] 2. During weekend [ ] 3. When I see them with their friend [ ] 4. When the adolescent ask such question [ ] 5. When the adolescent misbehaves [ ] 6. When issues about ARH issues comes up in the media e.g. TV [ ] 7. Others (specify_____

35. Do you feel comfortable discussing ARH issues with your adolescent children during the last time you did so? 1. Yes [ ] 2. No [ ] (*If No, go to Question 37*)

36. If yes to question 35, give reasons _____

37. If No to question 35, give reasons_____

38. Do you think your adolescent children have enough knowledge of ARH issues?

1. Yes [ ] 2. No [ ] (*If Yes go to Q 40*)

39. If No, which aspect will he/she like to receive more information?_____

40. Do your adolescent children open up or ask questions when discussing RH issues with them? 1. Yes [ ] 2. No [ ] (*If No, go to Question 42*)

41. If yes, what are their frequently asked question? _____

42. How does your adolescent respond to the ARH discussion?

1. Look very interested [ ] 2. Look somehow interesting [ ] 3. Indifferent [ ]

43a. Will you like to continue discussing ARH issues with your children in the future?

1. Yes [ ] 2. No [ ]

43b. Apart from ARH issues, what other things do you usually discuss with your adolescents?_____

SECTION D: SOURCES OF ARH INFORMATION TO ADOLESCENTS

44. What are the sources of ARH issues available to adolescents in this community (*Tick √ all mentioned*)

SN	Sources	Mentioned	Not mentioned
1.	Peer/Friends		
2.	Radio		
3.	Television		
4.	Newspaper/Magazine		
5.	Posters		
6.	Teacher/Boss		
7.	Health workers		
8.	Pastor/Imam		
9.	Grand Parents		
10.	Others (specify)		

45. What type(s) of information do you think adolescent would prefer to obtain from the following sources (people), and why do you think they prefer the sources for the information?

Sources	Two types of Information most preferred to get	Why/Reasons
1. Mother	1.	
	2.	

Sources	Two types of Information most preferred to get	Why/Reasons
2. Father	1.	
	2.	
3. Peer/Friends	1.	
	2.	
4. Radio	1.	
	2.	
5. Television	1.	
	2.	
6. Newspapers	1.	
	2.	
7. Posters	1.	
	2.	
8. Teacher/Boss	1.	
	2.	
9.Health workers	1.	
	2.	
10. Pastor/Imam	1.	
	2.	
11. Grand Parents	1.	
	2.	
12. Others (specify)		

46. Which of the following people/sources do adolescent children prefer to give them ARH information and give reason(s) for your answer?

SN	Sources	Preferred source *(can tick as many as possible)*	Most preferred *(Tick only one)*	Reasons for the preference
1.	Mother			
2.	Father			
3.	Peer/Friends			
4.	Radio			

5.	Television			
6.	Newspapers			
7.	Posters			
8.	Teacher/Boss			
9.	Health workers			
10.	Pastor/Imam			
11.	Grand Parents			
12.	Others (specify)			

47. Do you consider yourself a knowledgeable source on adolescent reproductive health (STI/HIV, Pregnancy and Abortion prevention) to your adolescent child? 1. Yes [ ] 2. No [ ]

48. If No to question 47, why? _____

SECTION E: FACTORS PROMOTING /INHIBITING PARENT-CHILD COMMUNICATION

49. What are the things that can promote parent-child communication on ARH?

_____

_____

50. What are the things that can inhibit parent-child communication on ARH?

_____

_____

51. How can the quality of information on ARH provided by parents to their children be improved?

1. Training of Parents on ARH [ ]
2. Health talks by health workers [ ]
3. Audio – visual [ ] *(Tick ✓ as many as appropriate)*
4. Through drama [ ]
5. Use of IEC materials [ ]
6. Through use of community meeting [ ]
7. Others (specify)_____

52. What suggestions do you have for the improvement of parent-children communication on adolescent reproductive health? _____

I thank you for taking the time to participate in this interview

Appendix IIb

Baseline Questionnaire For Adolescents

Effect of Training Intervention on Knowledge of Reproductive Health Communication between Parents and their Adolescents Children in two Communities of Oyo State

Greetings: My name is_____, a student in the Department of Health Promotion and Education, College of Medicine, University of Ibadan. We are conducting a research project to determine the **Effect of Training Intervention on Knowledge and Frequency of Reproductive Health Communication between Parents and their Adolescents** in this area. Adolescents are considered to be children in the group 10-19 years. I am here to learn from you and would be very glad if you can spare me some minutes to share your experiences with me. Please feel free to share your beliefs and opinions with me. All our discussion will be kept confidential and would be used to design appropriate intervention programme to promote parent-adolescent communication relating to adolescent reproductive health in this community. We also want to assure you that names are not required during this interview. Thanks for your anticipated co-operation.

LGA NAME:_____ SN_____

SECTION A – Socio-Demographic Characteristics

Instruction: Kindly provide answer to the following questions about yourself by ticking (✓) the alternative answers you think are appropriate in line with your views.

1. What is your age as at last birthday_____(in years)
2. Sex 1. Male [ ] 2. Female [ ]
3. Category/Occupation 1. In-school [ ] 2. Out-of-School [ ]
4. Class (For in-school only) 1. Primary 6 [ ] 2= JSS 1 [ ] 3=JSS 2 [ ] 4 = JSS3 [ ] 5=SSS 1 [ ] 6=SSS2 [ ] 7=SSS3 [ ] 8=Others (Specify)____
5. Educational level (For out-of-school only) 1. No formal education [ ] 2. Qur'anic education [ ] 3. Primary education [ ] 4. Some secondary education [ ] 5. Completed secondary education [ ]
6. Ethnic group 1. Yoruba [ ] 2. Hausa [ ] 3. Igbo [ ] 4. Others (specify)……
7. Religion 1. Christianity [ ] 2. Islam [ ] 3. Traditional [ ] 4. Others (specify _____
8. Position in the family along mother line_____

9. Father's level of education: 1. No formal education [ ] 2. Primary education [ ] 3. Secondary education [ ] 4. Vocational [ ] 5. Tertiary education [ ] 1= NCE [ ] 2=OND [ ] 3=HND [ ] 4=University [ ]

10. Father's Occupation 1 Civil servant [ ] 2 Trading [ ] 3 Artisan [ ] 4 Farming [ ] 5 Others specify_____

11. Mother's level of education 1. No formal education [ ] 2. Primary education [ ] 3. Secondary education [ ] 4. Vocational [ ] 5. Tertiary education [ ] 1= NCE [ ] 2=OND [ ] 3=HND [ ] 4=University [ ]

12. Mother's Occupation 1. Civil servant [ ] 2. Trading [ ] 3. Artisan [ ] 4. Farming [ ] 5. Housewife [ ] 6. Others (specify_____

13. How many wives is your father having? 1. Only my mother [ ] 2. ____wife/wives apart from my mother

13a. How many children does your family have?_____(put actual number)

13b. How many children are boys?_____ How many are girls?_____

14. With whom are you living now? 1. With both Parents [ ] 2. Mother alone [ ] 3. Father alone [ ] 4. Alone [ ] 5. Relatives [ ] 6. Guardian [ ] 7. Grandparents [ ] 8. Boy/Girlfriend [ ]

SECTION B: KNOWLEDGE ON ADOLESCENT REPRODUCTIVE HEALTH

15. Which of the following ways can adolescents used for the prevention of pregnancy? You can tick (√) more than one you considered correct.

SN	Ways or means of pregnancy prevention	True	False
1.	Abstaining from sexual intercourse		
2.	Use of traditional ring		
3.	Using condom for every act of sexual intercourse		
4.	Having sexual intercourse only during safe period		
5.	Use of any modern methods of contraceptives		
6.	Use of traditional bead		
7.	Avoiding casual sex		

16. Do you have a boyfriend/girlfriend? 1.Yes [ ] 2. No [ ]

17. At what age did you experience your first sexual intercourse? _____years

Never [ ]

18a. Have you had sexual intercourse in the last six months? 1. Yes [ ] 2. No [ ]

18b. Did you use condom during the last sexual encounter 1. Yes [ ] 2. No [ ]

19a. How many sexual partners do you ever have?_____

19b. How many sexual partners do you have as of today?_____

20. Have you ever heard of HIV/AIDS? 1. Yes [ ] 2. No [ ] (*If No go to Q 23*)

21. Do you think adolescent children are at risk of getting HIV/AIDS? 1.Yes [ ] 2.No [ ]

21a. If Yes, why?_____

21b. If No, why?_____

22. Is there anything that can be done to avoid contacting HIV/AIDS? 1. Yes [ ] 2. No [ ]

23. Which of the following is True or False about how to avoid getting Sexually Transmitted Infections?

SN	Statements	True	False
1.	Abstaining from sex completely		
2.	Being faithful to one partner		
3.	Avoiding casual sex		
4.	Using condom for every act of sexual intercourse		
5.	Avoiding commercial sex worker		
6.	Not sharing blade		
7.	Not sharing toilets, comb or clothes		
8.	Not sharing eating plates or utensils		

24. Mention 3 modes of transmission of HIV*(Don't the read options, tick as mentioned).*

1. Sexual intercourse with infected person [ ] 2. Mother-to-Child transmission [ ]
3. Through contaminated blood transfusion [ ] 4. Sharing of sharp object [ ]
5._____ 6. _____

25. Mention 3 potential health risks of early pregnancy *(Don't the read options, tick as mentioned).* 1. Contacting diseases including HIV/AIDS and STDs [ ] 2. Genital fistulae [ ] 3. Maternal mortality [ ] 4. Infertility [ ] 5. Cervical cancer [ ] 6. Caesarian delivery [ ]

26. Please indicate whether True or False to the following statements

	Knowledge Statements	True	False
1.	Puberty is the beginning of sexual maturity		
2.	Puberty starts earlier in girls than boys		

3.	Girls aged 10-14 years who experience menstruation cannot become pregnant because they are too young		
4.	Attraction towards opposite sex is normal at puberty		
5.	It is possible for male adolescent to impregnate a girl		
6.	Having sexual intercourse is a game of pure enjoyment		
7.	Adolescents who don't have sex occasionally are sexually unhealthy		
8.	Not having sex at all or not having sex occasionally can lead to sickness for boys		
9.	Not having sex at all or not having sex occasionally can lead to sickness for girls		

27. Some adolescent like you often say the following statement about adolescent reproductive health for each, indicate whether you Agree, Disagree, or Not Sure about each of the following statements with it.

Statements	Agree	Disagree	Not Sure
1. A girl should have sex before she gets married			
2. A boy should have sex before he gets married			
3. Unmarried young people who have started having sex should use a contraceptive method to avoid pregnancy			
4. Young people's knowledge of contraceptive encourages them to have sex with many people			
5. Discussing RH issues with adolescent can make them sexually promiscuous.			
6. Parents should be discussing ARH issues with their adolescent children			
7. Adolescent should never be exposed to ARH issues.			
8. Parents should be confident in discussing RH issues with their adolescents			
9. Young people's knowledge of contraceptive encourages them to have sex without fear of pregnancy			

SECTION C: PATTERNS OF COMMUNICATION BETWEEN PARENTS AND THEIR ADOLESCENTS

28. Have you ever discussed ARH issues with any of your parents? 1 Yes [ ] 2. No [ ](*If No go to Q 63*)

29a. If Yes, when was the last time you discussed ARH issues with your parents?

1. Yesterday [ ] 2. Today [ ] 3. Last week [ ] 4. Two week's ago [ ] 5. Last Month [ ] 6. Can't remember [ ] 7. Others_____

29b. How often do you discussed ARH issues with your Parents? 1. Once in a week [ ] 2. Twice a week [ ] 3. Once in a month [ ] 4. Twice a month [ ] 5. Once in three months [ ] 6. Other specify_____

30. What situations make you discuss any of the ARH information with your parents the last time you did so? _____

31. What issues of ARH did you discuss with your parents the last time you did so?_____

32. Who initiated the discussion on ARH? 1. Myself [ ] 2. My Parents [ ] 3. My neighbor [ ] 4. Others specify_____

33. Were you satisfied with the contents of the discussion 1. Yes [ ] 2. No [ ]

34. If Yes, give reasons _____

35. If No, give reasons_____

36. Were you satisfied with the duration of the discussion 1. Yes [ ] 2. No [ ]

37. If Yes, give reasons _____

38. If No, give reasons_____

Quality of Communication

39. Indicate Yes or No to the following questions on the quality of communication between you your parents the last time you discussed ARH issues

A	Clarity of message	Yes	No
1	Did you understand what your parents talked about?		
2	Did you understand what was important in the message?		
3	Did your parents clarify the meaning of the confusing word or message?		
4	Did you think your parents understand your message?		
5	Does the message exchanged easily understand by you?		
B	Responsiveness		
1	My parent responded to my questions and requests quickly during the discussion		
2	The discussion ran smoothly without any uncomfortable		

	silent moments		
3	My parents are willing to listen mine perspectives		
4	When I raised questions or concern my parents addressed them immediately.		
5	One of us kept silent from time to time during discussion		
C	Comfort		
1	Are you nervous talking to your parents?		
2	Did you feel that your parents trusted you.		
3	Did you feel that your parents are trustworthy?		
4	Were you comfortable interacting with you parents?		
5	My parents feel comfortable discussing with me.		

40. At what age do you start such discussion with your parents?_____

41. Do you involve other people in discussing ARH with your parents? 1. Yes [ ] 2. No [ ] (*If No go to Q 38*)

42. If involve others, can you mention who (probe for those involved) _____

43. Why do you involve this person during the discussion?_____

44a. Do you think it is important to discuss ARH issues with your parents? 1.Yes [ ] 2. No [ ]

44b. Give reasons_____

45. Do you support the idea that adolescents need to discuss RH issues with their parents? 1. Yes [ ] 2. No [ ]

46. If Yes, why do you support it_____

47. If No, why not?_____

48. What time do you discuss ARH with them? (*Can tick (√) as many as possible*)

1. After Day's work [ ] 2. During weekend [ ] 3. When with their friends [ ] 4. When asked related questions [ ] 5. When one adolescent misbehave in our environment [ ] 6. When issues about ARH issues comes up on the media [ ] 7. Others Specify_____

49. Do you feel comfortable discussing ARH issues with your Father? 1. Yes [ ] 2. No [ ]

50. Give reasons_____

51. Do you feel comfortable discussing ARH issues with your mother?1. Yes [ ] 2. No [ ]

52. Give reasons_____

53. Do you feel comfortable discussing ARH issues with both parents? 1.Yes [ ] 2. No [ ]

54. Give reasons_____

55. Do you think your Mother have enough knowledge of ARH issues? 1.Yes [ ] 2. No [ ]

56. Do you think your Father have enough knowledge of ARH issues?1. Yes [ ] 2. No [ ]

57. Are your parents open up or ask questions during the discussions?1. Yes [ ] 2. No [ ] (*If No, go to Question 59*)

58. If Yes, in what way_____

59. Do you think your parents like or approves of the ARH discussion with you? 1. Yes [ ] 2. No [ ]

60. Give reasons_____

61. How does your parent respond to the ARH discussion? 1. Look very interested [ ] 2. Look somehow interesting [ ] 3. Indifferent [ ]

62a. Will you like to continue discussing ARH issues with your parents in the future? 1. Yes [ ] 2. No [ ]

62b. Apart from ARH issues, what other things do you usually discuss with your parents?_____

SECTION D: SOURCES OF ARH INFORMATION

63. What are the sources of ARH issues available to you? (Tick all mentioned)

SN	Sources	Mentioned	Not mentioned
1.	Mother		
2.	Father		
3.	Peer/Friends		
4.	Radio		
5.	Television		
6.	Newspaper		
7.	Posters		
8.	Teacher/Boss		
9.	Health workers		
10.	Pastor/Imam		
11.	Grand Parents		
12.	Others (specify)		

64. Do you consider your parents as a source of adolescent reproductive health information (*STI/HIV, Pregnancy and Abortion prevention*) to you? 1. Yes [ ] 2. No [ ]

65. If No, why?_____

66. What type(s) of information do you prefer to receive from the following sources (people), and why do you prefer that source for the information?

Sources	Two types of Information preferred to get	Why
1. Mother	1. 2.	
2. Father	1. 2.	
3. Peer/Friends	1. 2.	
4. Radio	1. 2.	
5. Television	1. 2.	
6. Newspapers/ Magazine	1. 2.	
7. Posters	1. 2.	
8. Teacher/Boss	1. 2.	
9. Health workers	1. 2.	
10. Pastor/Imam	1. 2.	
11. Grand Parents	1. 2.	
12. Others (specify)		

67. Which of the following people/source do you prefer to give you ARH information and give reason(s) for your answer?

SN	Sources	Preferred source (can tick as many as possible	Most preferred (Tick only one)	Reasons for the preference
1.	Mother			
2.	Father			
3.	Peer/Friends			
4.	Radio			
5.	Television			
6.	Newspapers			
7.	Posters			
8.	Teacher/Boss			
9.	Health			

	workers			
10.	Pastor/Imam			
11.	Grand Parents			
12.	Others (specify)			

SECTION E: FACTORS PROMOTING /INHIBITING PARENT-CHILD COMMUNICATION

68. What are the things that can promote parent-child communication on ARH?

_____

69. What are the things that can inhibit parent-child communication on ARH?

_____

70. How can the quality of information on ARH provided by parents to their children be improved?

1. Training of Parents on ARH [ ]
2. Health talks by health workers [ ]
3. Audio – visual [ ] *(Tick ✓ as many as appropriate)*
4. Through drama [ ]
5. Use of IEC materials [ ]
6. Through community meeting [ ]
7. Others (specify)……..

71. What suggestions do you have for the improvement of parent-children communication on adolescent reproductive health?_____

I thank you for taking the time to participate in this interview

Appendix IIIa

Post-Intervention Questionnaire for Parents

Effect of Training Intervention on Knowledge and Frequency of Reproductive Health Communication between Parents and Adolescents Children in two Communities of Oyo State

Greetings: My name is_____, a student in the Department of Health Promotion and

Education, College of Medicine, University of Ibadan. We are conducting a research project to determine the **Effect of Training Intervention on Knowledge and Frequency of Reproductive Health Communication between Parents and their Adolescents Children** in this area. Adolescents are considered to be children in the group 10-19 years. I am here to learn from you and would be very glad if you can spare me some minutes to share your experiences with me. Please feel free to share your beliefs and opinions with me. All our discussion will be kept confidential. We also want to assure you that names are not required during this interview. Thanks for your anticipated co-operation.

LGA NAME:_____ **SN**_____

SECTION A – Socio-Demographic Characteristics

Instruction: Kindly provide answer to the following questions about yourself by ticking (✓) the alternative answers you think are appropriate in line with your views.

1. What is your **age** as at last birthday_____ (*Actual age or year of birth?*)
2. Role in the family 1. Father [ ] 2. Mother [ ]
3. Ethnic group 1. Yoruba [ ] 2. Hausa [ ] 3. Igbo [ ] 4.Others (specify)_____
4. Religion 1. Christianity [ ] 2. Islam [ ] 3. Traditional [ ] 4. Others (specify _____)
5. Highest level of Education 1. No formal education [ ] 2. Primary education [ ] 3. Secondary education [ ] 4. Vocational [ ] 5. Tertiary education [ ] 1= NCE [ ] 2=OND [ ] 3=HND [ ] 4=University [ ]
6. Occupation 1. Civil servant [ ] 2. Trading [ ] 3 Artisan [ ] 4. Farming [ ] 5 Housewife [ ] 6. Labourer/cleaner [ ] 7. Self-employed [ ] 8. Others (Specify_____)

7. What is your **marital status**? 1. Married [ ] 2. Widowed [ ] 3.Widower [ ] 4. Never married [ ] 5. Divorced [ ] 6. Separated [ ] (***Ask Q8 if married only***)

8. (***For married only***) what is your type of marriage 1. Monogamy [ ] 2. Polygyny [ ]

9. Are the whole family (husband, wife (vies) and children) living together in the same house/apartment? 1. Yes [ ] 2. No [ ]

10. How long have you been married?_____

11. Are you living with your husband/wife and children in the same house? 1. Yes [ ] 2. No [ ]

12a. How many children do you have?_____(Put actual number).

12b. Number of Males _____ Number of Females_____**(Put actual number)**.

13. How many children do you have who are between the ages of 10-19 years?_____ How many are boys_____ How many are girls_____

14. Are you living together with your adolescent children in the same house? 1. Yes [ ] 2. No [ ]

SECTION B: Knowledge on Adolescent Reproductive Health

15. Which of the following ways can adolescents use for the prevention of pregnancy? You can tick **(√)** more than one you considered correct.

SN	Ways or means of pregnancy prevention	True	False
1.	Abstaining from sexual intercourse		
2.	Use of traditional ring		
3.	Using condom for every act of sexual intercourse		
4.	Having sexual intercourse only during safe period		
5.	Use of any modern methods of contraceptives		
6.	Use of traditional bead		
7.	Avoiding casual sex		

16. Have you ever heard of HIV/AIDS? 1. Yes [ ] 2.No [ ] (***If No go to Q 24***)

17a. Do you think it is possible for adolescent children age 10-19 to get HIV/AIDS? 1. Yes [ ] 2.No [ ]

17b. If Yes, please explain how_____

17c. If No, please explain why_____

18. Is it possible to prevent HIV/AIDS among adolescent? 1. Yes [ ] 2. No [ ]

19. Which of the following is **True** or **False** about how to **avoid** getting Sexually Transmitted Infections?

SN	Statements	True	False
1.	Abstaining from sex completely		
2.	Being faithful to one partner		
3.	Avoiding casual sex		
4.	Using condom for every act of sexual intercourse		
5.	Avoiding commercial sex workers		
6.	Not sharing sharp objects e.g. blade		
7.	Not sharing toilets, comb or clothes		
8.	Not sharing eating plates or utensils		

20. Mention **3** modes of transmission of HIV ***(Don't read the options, tick as mentioned).*** 1. Sexual intercourse with infected person [ ] 2. Mother-to-Child transmission [ ] 3. Through contaminated blood transfusion [ ] 4.Sharing of sharp object such as razor blade/knife [ ] 5. Deep kissing [ ] 6._____

21. Mention **3** potential health risks or problem associated with early pregnancy among adolescents ***(Don't read the options, tick as mentioned).***

1. Contacting diseases including HIV/AIDS and STDs [ ] 2. Genital fistulae [ ] 3. Maternal/Child mortality [ ] 4. Infertility [ ] 5. Cervical cancer [ ] 6. Caesarian delivery [ ]

22. Please indicate whether **True** or **False** to the following statements

	Knowledge Statements	True	False
1.	Puberty marks the beginning of sexual maturity		
2.	Puberty starts earlier in girls than boys		
3.	Girls aged 10-14 years who experience menstruation cannot become pregnant because they are too young		
4.	Attraction towards opposite sex is normal at puberty		
5.	It is possible for male adolescent to impregnate a girl		
6.	Adolescents who don't have sex occasionally are sexually unhealthy		
7.	Not having sex at all or not having sex occasionally can lead to sickness for boys		

8.	Not having sex at all or not having sex occasionally can lead to sickness for girls		

23. Some parents like you often say the following statement about adolescent reproductive health for each, indicate whether you **Agree**, **Disagree**, or **Not Sure** about each of the following statements with it.

Statements	**Agree**	**Disagree**	**Not Sure**
1. A girl should have sex before she gets married			
2. A boy should have sex before he gets married			
3. Unmarried young people who have started having sex should use a contraceptive method to avoid pregnancy			
4. Young people's knowledge of contraceptive encourages them to have sex with many people			
5. Discussing RH issues with adolescent can make them sexually promiscuous.			
6. Parents should be discussing ARH issues with their adolescent children			
7. Adolescent should never be exposed to ARH issues.			
8. Parents should be confident in discussing RH issues with their adolescents			
9. Young people's knowledge of contraceptive encourages them to have sex without fear of pregnancy			

SECTION C: PATTERNS OF COMMUNICATION BETWEEN PARENT AND ADOLESCENTS

24. Have you ever discussed ARH issues with any of your adolescent children? 1. Yes [ ] 2. No [ ] (***If No, go to Question 44***)

24b. Did the discussion occur during the last six months? 1Yes [ ] 2. No [ ]

25a. If Yes, when was the last time you discussed ARH issues with your adolescent children?

1. Yesterday [ ] 2. Today [ ] 3. Last week [ ] 4.Two week's ago [ ] 5 Last Month [ ] 6. Can't remember [ ] 7. Others_____

25b. How often do you discussed ARH issues with your adolescent children? 1. Once in a week [ ] 2. Twice a week [ ] 3. Once in a month [ ] 4. Twice a month [ ] 5. Once in three months [ ] 6. Other specify _____

26. What situations made you discuss the ARH information with your children the last time you did so? _____

27. What did you discuss with your adolescent child the last time you did so?_____

28. Who initiated or encouraged the discussion on ARH? 1. Myself [ ] 2. My adolescent child [ ] 3.My spouse [ ] 4. My Neighbour [ ] 5. Others (specify_____

29a. At what age do you think is the best time to start discussion about RH with an adolescent for male?_____

29b. At what age do you think is the best time to start discussion about RH with an adolescent for female?_____

30a. Give reasons for the age given by you for male _____

30b. Give reasons for the age given by you for female_____

31. Have you ever requested someone to discuss RH issues with your adolescent? 1. Yes [ ] 2. No [ ] (***If No, go to Question 34***)

32. If Yes, can you mention who was involved? (***i.e. in terms of relationship to you***)

_____

33. **If yes to question 31**, why did you request someone else to discuss RH with your children _____

34. At what time do you discuss ARH with them? (***Can tick (√) as many as possible***) 1. After school / Day's work [ ] 2. During weekend [ ] 3. When I see them with their friend [ ] 4. When the adolescent ask such question [ ] 5. When the adolescent misbehaves [ ] 6. When issues about ARH issues comes up in the media e.g. TV [ ] 7. Others (specify_____

35. Do you feel comfortable discussing ARH issues with your adolescent children during the last time you did so? 1. Yes [ ] 2. No [ ] (***If No, go to Question 37***)

36. If Yes to question 35, give reasons _____

37. **If No to question 35**, give reasons_____

38. Do you think your adolescent children have enough knowledge of ARH issues?

1. Yes [ ] 2. No [ ] (***If Yes go to Q 40***)

39. If No, which aspect will he/she like to receive more information?_____

40. Do your adolescent children open up or ask questions when discussing RH issues with them? 1. Yes [ ] 2. No [ ] (***If No, go to Question 42***)

41. If Yes, what are their frequently asked question? _____

42. How does your adolescent child respond to the ARH discussion?

1. Look very interested [ ] 2. Look somehow interesting [ ] 3. Indifferent [ ]

43a. Will you like to continue discussing ARH issues with your children in the future?1. Yes [ ] 2. No [ ]

43b. Apart from ARH issues, what other things do you usually discuss with your adolescents?_____

SECTION D: SOURCES OF ARH INFORMATION TO ADOLESCENTS

44. What are the sources of ARH issues available to adolescents in this community (***Tick √ all mentioned***)

SN	**Sources**	**Mentioned**	**Not mentioned**
1.	Peer/Friends		
2.	Radio		
3.	Television		
4.	Newspaper/Magazine		
5.	Posters		
6.	Teacher/Boss		
7.	Health workers		
8.	Pastor/Imam		
9.	Parents		
10.	Others (specify)		

45. Which of the following people/sources do adolescent children prefer to give them ARH information and give reason(s) for your answer?

SN	Sources	Preferred source ***(can tick as***	Most preferred ***(Tick only***	Reasons for the preference

		many as possible)	***one)***	
1.	Mother			
2.	Father			
3.	Peer/Friends			
4.	Radio			
5.	Television			
6.	Newspapers			
7.	Posters			
8.	Teacher/Boss			
9.	Health workers			
10.	Pastor/Imam			
11.	Grand Parents			
12.	Others (specify)			

46. Do you consider yourself a knowledgeable source on adolescent reproductive health (STI/HIV, Pregnancy and Abortion prevention) to your adolescent child? 1. Yes [ ] 2. No [ ]

47. **If No to question 46**, why? _____

SECTION E: EVALUATION OF THE INTERVENTION

48. Are you aware of any programme in this community on Parent Child Communication? 1. Yes [ ] 2. No [ ]

49. Are you one of the parents trained? 1. Yes [ ] 2. No [ ] ***(If No Skip to Q51)***

50. If Yes, how will you assess the programme? 1. Very necessary [ ] 2. Not necessary [ ] 3. Can't Say anything about it [ ]

51. **If No to question 49**, are you willing to be trained if there is any other opportunity in future? 1. Yes [ ] 2. No [ ]

52. Did you personally derive any benefit from the programme? 1. Yes [ ] 2. No [ ]

53. If Yes, what are the benefits derived from the Programme? _____

54. How was the intervention useful to you?_____

55. What are the things you liked about the intervention?_____

56. What are the things you dislike about the intervention?_____

57. What issue(s) did you discussed most with you adolescent child in the last six months? (***Tick (√) all that apply***) 1. STI Prevention [ ] 2. HIV/AIDS Prevention [ ] 3. Pregnancy prevention [ ] 4. To face their study/work [ ] 5. Abortion Prevention [ ]

58. Did you encounter any difficulty after the intervention discussing ARH issues with your adolescent child? 1. Yes [ ] 2. No [ ]

59. If Yes, what are these difficulties experienced during the period? _____

60. Will you recommend this programme to be conducted in another community in the LGA? 1. Yes [ ] 2. No [ ]

61. If Yes, why? _____

62. If No, why? _____

I thank you for taking the time to participate in this interview

Appendix IIIb

Post-Intervention Questionnaire For Adolescents

Effect of Training Intervention on Knowledge and Frequency of Reproductive Health Communication between Parents and Adolescents Children in two Communities of Oyo State

Greetings: My name is_____, a student in the Department of Health Promotion and Education, College of Medicine, University of Ibadan. We are conducting a research project to determine the **Effect of Training Intervention on Knowledge and Frequency of Reproductive Health Communication between Parents and Adolescents Children** in this area. Adolescents are considered to be children in the group 10-19 years. I am here to learn from you and would be very glad if you can spare me some minutes to share your experiences with me. Please feel free to share your beliefs and opinions with me. All our discussion will be kept confidential. We also want to assure you that names are not required during this interview. Thanks for your anticipated co-operation.

LGA NAME:_____ **SN**_____

SECTION A – Socio-Demographic Characteristics

Instruction: Kindly provide answer to the following questions about yourself by ticking (✓) the alternative answers you think are appropriate in line with your views.

1. What is your **age** as at last birthday_____(in years)
2. Sex 1. Male [ ] 2. Female [ ]
3. Category/Occupation 1. In-school [ ] 2. Out-of-School [ ]
4. Class (For in-school only) 1. Primary 6 [ ] 2. JSS 1 [ ] 3. JSS 2 [ ] 4. JSS3 [ ] 5. SSS 1 [ ] 6. SSS2 [ ] 7. SSS3 [ ] 8. Others (Specify)_____
5. Educational level (For out-of-school only) 1. No formal education [ ] 2. Qur'anic education [ ] 3. Primary education [ ] 4.Some secondary education [ ] 5. Completed secondary education [ ]
6. Ethnic group 1. Yoruba [ ] 2. Hausa [ ] 3.Igbo [ ] 4. Others (specify)_____
7. Religion 1. Christianity [ ] 2. Islam [ ] 3. Traditional [ ] 4. Others(specify _____
8. Position in the family along mother line_____

9. Father's level of education: 1.No formal education [ ] 2. Primary education [ ] 3. Secondary education [ ] 4. Vocational [ ] 5. Tertiary education [ ] 1= NCE [ ] 2=OND [ ] 3=HND [ ] 4=University [ ] 6. Qur'anic education [ ]

10. Father's Occupation 1. Civil servant [ ] 2. Trading [ ] 3. Artisan [ ] 4 Farming [ ] 6. Others specify_____

11. Mother's level of education 1. No formal education [ ] 2. Primary education [ ] 3. Secondary education [ ] 4. Vocational [ ] 5. Tertiary education [ ] 1= NCE [ ] 2=OND [ ] 3=HND [ ] 4=University [ ] 6. Qur'anic education [ ]

12. Mother's Occupation 1. Civil servant [ ] 2. Trading [ ] 3. Artisan [ ] 4. Farming [ ] 5. Housewife [ ] 6. Others (specify_____

13. How many wives is your father having? 1. Only my mother [ ] 2. ____wife/wives apart from my mother

13a. How many children does your family have?_____(put actual number)

13b. How many children are boys?_____ How many are girls?_____

14. With whom are you living now? 1. With both Parents [ ] 2. Mother alone [ ] 3. Father alone [ ] 4. Alone [ ] 5. Relatives [ ] 6. Guardian [ ] 7. Grandparents [ ] 8. Boy/Girlfriend [ ] 9. Friend [ ]

SECTION B: KNOWLEDGE ON ADOLESCENT REPRODUCTIVE HEALTH

15. Which of the following ways can adolescents used for the prevention of pregnancy? You can tick **(✓)** more than one you considered correct.

SN	Ways or means of pregnancy prevention	True	False
1.	Abstaining from sexual intercourse		
2.	Use of traditional ring		
3.	Using condom for every act of sexual intercourse		
4.	Having sexual intercourse only during safe period		
5.	Use of any modern methods of contraceptives		
6.	Use of traditional bead		
7.	Avoiding casual sex		

16. Do you have a boyfriend/girlfriend? 1.Yes [ ] 2. No [ ]

17. At what age did you experience your first sexual intercourse? _____years Never [ ] **(Go to Q 20)**

18a. Have you had sexual intercourse in the last six months? 1. Yes [ ] 2. No [ ]

18b. Did you use condom during the last sexual encounter? 1. Yes [ ] 2. No [ ]

19a. How many sexual partners have you had?_____

19b. How many sexual partners do you have as of today?_____

20. Have you ever heard of HIV/AIDS? 1. Yes [ ] 2. No [ ] (***If No go to Q 23***)

21. Do you think adolescent children are at risk of getting HIV/AIDS? 1.Yes [ ] 2.No [ ]

21a. If Yes, why?_____

21b. If No, why?_____

22. Is there anything that can be done to avoid contacting HIV/AIDS? 1. Yes [ ] 2. No [ ]

23. Which of the following is **True** or **False** about how to avoid getting Sexually Transmitted Infections?

SN	Statements	True	False
1.	Abstaining from sex completely		
2.	Being faithful to one partner		
3.	Avoiding casual sex		
4.	Using condom for every act of sexual intercourse		
5.	Avoiding commercial sex worker		
6.	Not sharing sharp objects e.g. blade		
7.	Not sharing toilets, comb or clothes		
8.	Not sharing eating plates or utensils		

24. Mention **3** modes of transmission of HIV ***(Don't read the options, tick (√) as mentioned).***

1. Sexual intercourse with infected person [ ] 2. Mother-to-Child transmission [ ]
3. Through contaminated blood transfusion [ ] 4. Sharing of sharp object [ ]
5. Deep Kissing [ ] 6. _____

25. Mention **3** potential health risks of early pregnancy ***(Don't read the options, tick (✓) as mentioned).***

1. Contacting diseases including HIV/AIDS and STDs [ ] 2. Genital fistulae [ ]
3. Maternal/Child mortality [ ] 4. Infertility [ ] 5. Cervical cancer [ ]
6. Caesarian delivery [ ]

26. Please indicate whether **True** or **Fals**e to the following statements

	Knowledge Statements	True	False
1.	Puberty is the beginning of sexual maturity		

2.	Puberty starts earlier in girls than boys		
3.	Girls aged 10-14 years who experience menstruation cannot become pregnant because they are too young		
4.	Attraction towards opposite sex is normal at puberty		
5.	It is possible for male adolescent to impregnate a adolescent girl		
6.	Having sexual intercourse is a game of pure enjoyment		
7.	Adolescents who don't have sex occasionally are sexually unhealthy		
8.	Not having sex at all or not having sex occasionally can lead to sickness for boys		
9.	Not having sex at all or not having sex occasionally can lead to sickness for girls		

27. Some adolescents like you often make the following statements about adolescent reproductive health issues for each, indicate whether you **Agree**, **Disagree**, or **Not Sure** about each of the following statements with it.

Statements	**Agree**	**Disagree**	**Not Sure**
1. A girl should have sex before she gets married			
2. A boy should have sex before he gets married			
3. Unmarried young people who have started having sex should use a contraceptive method to avoid pregnancy			
4. Young people's knowledge of contraceptive encourages them to have sex with many people			
5. Discussing RH issues with adolescent can make them sexually promiscuous.			
6. Parents should be discussing ARH issues with their adolescent children			
7. Adolescent should never be exposed to ARH issues.			
8. Parents should be confident in discussing ARH issues with their adolescents			

9. Young people's knowledge of contraceptive encourages them to have sex without fear of pregnancy			

SECTION C: PATTERNS OF COMMUNICATION BETWEEN PARENTS AND THEIR ADOLESCENTS

28a. Have you ever discussed ARH issues with any of your parents? 1Yes [ ] 2. No [ ] (***If No go to Q 63***)

28b Did the discussion occur during the last six months 1 Yes [ ] 2. No [ ]

29a. If Yes, when was the last time you discussed ARH issues with your parents?

1. Yesterday [ ] 2. Today [ ] 3. Last week [ ] 4.Two week's ago [ ] 5. Last Month [ ] 6. Can't remember [ ] 7. Others_____

29b. How often do you discussed ARH issues with your Parents? 1. Once in a week [ ] 2. Twice a week [ ] 3. Once in a month [ ] 4. Twice a month [ ] 5. Once in three months [ ] 6. Other specify_____

30. What situations make you discuss any of the ARH issue with your parents the last time you did so? _____

31. What issues of ARH did you discuss with your parents the last time you did so?_____

32. Who initiated the discussion on ARH? 1. Myself [ ] 2. My Parents [ ] 3. My neighbour [ ] 4. Others specify_____

33. Were you satisfied with the **contents** of the discussion? 1. Yes [ ] 2. No [ ]

34. If Yes, give reasons_____

35. If No, give reasons_____

36. Were you satisfied with the **duration** of the discussion 1. Yes [ ] 2. No [ ]

37. If Yes, give reasons _____

38. If No, give reasons_____

Quality of Communication

39. Indicate **Yes** or **No** to the following questions on the quality of communication between you and your parents the last time you discussed ARH issues

A	**Clarity of message**	**Yes**	**No**
1	Did you understand what your parents talked about?		
2	Did you understand what was important in the message?		

3	Did your parents clarify the meaning of the confusing word or message?		
4	Did you think your parents understood your message?		
5	Did you understand the message exchanged easily?		
B	**Responsiveness**		
1	My parent responded to my questions and requests quickly during the discussion		
2	The discussion ran smoothly without any uncomfortable silent moments		
3	My parents are willing to listen to my perspectives		
4	When I raised questions or concern my parents addressed them immediately.		
5	One of us kept silent from time to time during discussion		
C	**Comfort**		
1	Are you nervous talking to your parents on RH issues?		
2	Did you feel that your parents trusted you?		
3	Did you feel that your parents are trustworthy?		
4	Were you comfortable interacting with you parents?		
5	My parents feel comfortable discussing with me.		

40. At what age do you start such discussion with your parents?_____

41. Do you involve other people in discussing ARH with your parents? 1. Yes [ ] 2. No [ ] (***If No go to Q 44a***)

42. If involved others, can you mention who (**probe for those involved**) _____

43. Why do you involve this person during the discussion?_____

44a. Do you think it is necessary to discuss ARH issues with your parents? 1. Yes [ ] 2. No [ ]

44b. Give reasons_____

45. Do you support the idea that adolescents need to discuss RH issues with their parents? 1. Yes [ ] 2. No [ ]

46. If Yes, why do you support it_____

47. If No, why not?_____

48. What time do you discuss ARH with them? (***Can tick (√) as many as possible***)

1. After Day's work [ ] 2. During weekend [ ] 3. When with their friends [ ]

4. When asked related questions [ ] 5. When one adolescent misbehave in our environment [ ] 6. When issues about ARH issues comes up on the media [ ] 7. Others Specify_____

49. Do you feel comfortable discussing ARH issues with your Father? 1. Yes [ ] 2. No [ ]
50. Give reasons_____
51. Do you feel comfortable discussing ARH issues with your mother? 1. Yes [ ] 2. No [ ]
52. Give reasons_____
53. Do you feel comfortable discussing ARH issues with both parents? 1. Yes [ ] 2. No [ ]
54. Give reasons_____
55. Do you think your Mother have enough knowledge of ARH issues? 1. Yes [ ] 2. No [ ]
56. Do you think your Father have enough knowledge of ARH issues? 1. Yes [ ] 2. No [ ]
57. Do your parents ask questions during the discussions? 1. Yes [ ] 2. No [ ] (***If No, go to Question 59***)
58. If Yes, in what way_____
59. Do you think your parents like or approves of the ARH discussion with you? 1. Yes [ ] 2. No [ ]
60. Give reasons_____
61. How does your parent respond to the ARH discussion? 1. Look very interested [ ] 2. Look somehow interesting [ ] 3. Indifferent [ ]

62a. Will you like to continue discussing ARH issues with your parents in the future? 1. Yes [ ] 2. No [ ]

62b. Apart from ARH issues, what other things do you usually discuss with your parents?
_____

SECTION D: SOURCES OF ARH INFORMATION

63. What are the sources of ARH issues available to you? (**Tick *(√)* all mentioned**)

SN	Sources	Mentioned	Not mentioned
1.	Mother		

2.	Father		
3.	Peer/Friends		
4.	Radio		
5.	Television		
6.	Newspaper		
7.	Posters		
8.	Teacher/Boss		
9.	Health workers		
10.	Pastor/Imam		
11.	Grand Parents		
12.	Others (specify)		

64. Do you consider your parents as a source of adolescent reproductive health information (*STI/HIV, Pregnancy and Abortion prevention*) to you? 1. Yes [ ] 2 No [ ]

65. If No, why?_____

66. Which of the following people/source do you prefer to give you ARH information and give reason(s) for your answer?

SN	**Sources**	**Preferred source** ***(Can tick as many as possible)***	**Most preferred** ***(Tick only one)***	**Reasons for the preference**
1.	Mother			
2.	Father			
3.	Peer/Friends			
4.	Radio			
5.	Television			
6.	Newspapers			
7.	Posters			
8.	Teacher/Boss			
9.	Health workers			
10.	Pastor/Imam			
11.	Grand Parents			
12.	Others (specify)			

SECTION E: EVALUATION OF THE INTERVENTION

67. Does any of your parents discuss ARH issues with you in the last 6 months?

1.Yes [ ] 2. No [ ]

68. What issue(s) did he/she discussed most with you in the last 6 months (***Tick (√) all that apply***)

1. STI Prevention [ ] 2. HIV/AIDS Prevention [ ] 3. Pregnancy prevention [ ]
4. To face their study/work [ ] 5. Abortion Prevention [ ] 6. Others (specify____

69. Who initiated the discussion? 1. Myself [ ] 2. My Mother [ ] 3.My Father [ ]
4. My Neighbour [ ] 5. My Friend/Peer [ ] 6. Others (specify_____

70. Have you make any change in behaviour as a result of that discussion? 1.Yes [ ]
2. No [ ]

71. What changes did you make in your behaviour? _____

72. Can you attribute the changes to the discussion between you and your parents? 1. Yes [ ] 2. No [ ]

73. Did you notice any difference in the way your parent discuss RHI with you before and in the last six month? 1. Yes [ ] 2. No [ ]

74. What was the difference that you noticed_____

75. Can you freely discuss ARH issues with any of your parents now? 1. Yes [ ]
2. No [ ]

I thank you for taking the time to participate in this interview

Appendix IIIc

IBEERE FUN AWON OBI

Akori : Ipati idani leko lee ko lori ibara eni soro nipa imo eto ati ilera to je mo ibimo laarin obi ati odo langba won ni agbegbe meji ni Ipinle Oyo

Ikini: oruko mi ni……., mo je omo ile eko giga ti Ile eko giga ti Ibadan. Mo n se iwadi lati mo ipa ti idanileko lori ibara eni soro nipa imo ati eto ilera ibalopo ati ibimo laarin obi ati awon odo won ni agbegbe yii. Odo langba e ni ti o je omo odun mewa si ookandinlogun. Mo wa lati wa mo kun imo ni, inu mi a si dun ti e ba le yonda asiko die fun mi. E jowo anfaani wa fun yin lati salaye nnkan ti e gbagbo pelu mi. Gbogbo oro ti e baso ni a maa lo lati fi se idanileko, ko si si eni ti a o ba so nkankan ninu awon oro wonyii. Mo si fe fi dayin loju pe n ko ni lo oruko yin ninu iwadi yii. E se fun ifowosowopo yin.

Oruko Ijoba Ibile yi_____

No_____

APA KINNI:

Akiyesi: E jowo e dahun awon ibeere wonyii nipa ara yin nigba ti e ba fa ami yi (✓) fun idahun ti e ro pe o ye fun awon ibeere naa ni ero okan yin

1. E to omo odun melo…….**(E so ojo ori tabi odun ti a bi yin**)
2. Bawo le see je ninu idile yii? 1. Baba [ ] 2. Mama [ ]
3. Eya wo ni yin? 1. Yoruba [ ] 2. Hausa [ ] 3.Igbo [ ] 4. E so Omiran _____
4. Esin 1. Igbagbo [ ] 2. Musulumi [ ] 3. Esin abalaye [ ] 4. E so Omiran _____
5. Ipele eko ti e ti ka: 1. Mi o lo si ile-iwe rara [ ] 2. Eko agba [ ] 3. Ile kewu [ ] 4. Nko pari ile-iwe alakobere [ ] 5. Mo pari ile-iwe eko alakobere [ ] 6. Mo ka die ninu ile-iwe eko- girama [ ] 7. Mo pari ile-iwe eko girama [ ] 8. Mo ka die ninu ile-iwe giga [ ] 9. Mo pari ile-iwe giga [ ] 10. Mo ko ise owo [ ] 11. Eko eyikeyi ti a ko daruko _____
6. Ise: 1. Osise ijoba [ ] 2. Kata kara [ ] 3. Onise owo [ ] 4. Agbe [ ] 5. Iyawo ile [ ] 6. Alagbase [ ] 7. Aladani [ ] 8. Eko eyikeyi ti a ko tii daruko _____
7. Igbeyawo: 1. Mo ti se igbeyawo [ ] 2. Oko mi ti ku [ ] 3. Iyawo mi ti ku [ ] 4. Nko tii se igbeyawo ri [ ] 5. Igbeyawo wa ti tuka [ ] 6. A n gbe lo tooto [ ]

(Ibeere kejo wa fun awon to ba ti se igbeyawo nikan)

8. Iru eto igbeyawo wo le se? 1. Oniyawo kan [ ] 2. Oniyawo pupo [ ]

9. Se ebi yin (oko ati awon iyawo yin gbe po ninu ile kanna? 1. Beeni [ ] 2. Beeko [ ]

10. O to igbawo ni e ti se igbeyawo? _____

11. Se e ngbe pelu oko/iyawo ati awon omo yin ninu ile kan naa? 1. Beeni [ ] 2. Beeko [ ]

12a. Omo melo ni e ti bi? (**E ko iye nomba ti won je sii**) _____

12b. Okunrin melo:_____ Obinrin melo_____ (**Fi iye nomba ti won je sii**)

13. Melo ninu awon omo yin ni ojo ori won ti to odun mewa si ookandinlogun?
Awon melo ni Okunrin_____ Awon melo ni Obinrin_____

14. Se en gbe pelu awon omo yin ti ojo ori won je mewa si ookandinlogun? 1. Beeni [ ] 2. Beeko [ ]

APA KEJI: Imo nipa Ibalopo ati Ibimo laarin Odo langba

15. Ewo ninu awon ona wonyii ni awon odo langba lee lo lati dena oyun nini? (Fala (✓) si gbogbo awon ti e lero pe o je idahun si awon ibeere yii)

No	Ona ti a lee gba lati dena oyun nini	Beeni	Beeko
1.	Yiyera fun ibalopo		
2.	Lilo oruka ibile		
3.	Yiyera fun ibalopo alatagba		
4.	Lilo roba idaabobo ni gbogbo igba ti a ba fe lajosepo		
5.	Nini ibalopo ni asiko ti a mo pe oyun ko lee waye		
6.	Lilo awon eto ti a fin dena oyun nini ti igbalode		

16. N je eti gbo nipa kokoro arun eedi? 1. Beeni [ ] 2. Beeko [ ] **(To ba je beeko, lo si ibeere 25)**

17a. Se e lero pe o see se ki odo langba ni kokoro arun eedi? 1. Beeni [ ] 2. Beeko [ ]

17b. To ba je beeni, e jowo e se alaye_____
_____

17c. To ba je beeko, e jowo e se alaye_____
_____

18. N je osee se ki a dena kokoro/arun eedi laarin awon odo langba? 1. Beeni [ ] 2. Beeko [ ]

19. E wo ninu awon wonyii lo je ooto tabi iro nipa ona ti a lee gba lati yera fun kokoro to je mo ibalopo?

No	Oro	Ooto ni	Iro ni
1.	Yiyago patapata fun ibalopo		
2.	Jije olododo si ololufe eni		
3.	Yiyera fun ibalopo alatagba		
4.	Lilo roba idabobo ni gbogbo igba ti a ba fe lajosepo		
5.	Yiyera fun awon olowo nabi		
6.	Yiyera fun lilo abe fele		
7.	Yiyera fun lilo ile gbonse pelu elomiran		
8.	Yiyera funlilo abo ounje tabi sibi pelu elomiran		

20. Daruko Ona meta ti kokoro eedi lee gba tan ka (E ma ka awon ti a ko si sale yii, fala si eyi ti won ba so)

1. Ibalopo pelu eni to ti ni kokoro yii [ ] 2. Lati ara mama si omo [ ] 3.Nipase gbigba eje eni ti o ti ni kokoro yii [ ] 4. Yiya ohun elo bi abe tabi bileedi lo [ ]
5. Omiran _____

21. Daruko meta ninu ewu tabi isoro ti o ro mo ki omode tete loyun (ma se ka awon ti a ko si sa le jade, fala si eleyi ti won daruko) 1.Kiko aisan bii eedi ati awon ti o lee jeyo nipase ibalopo [ ] 2. Ijapo ile ito ati ile ibimo [ ] 3. Iku iya nipase omo bibi [ ] 4. Airomo bi [ ] 5. Arun jejere oju ara [ ] 6. Fifi abe gbe ebi omo [ ] 7. Omiran _____

22. E so boya ooto ni tabi iro ni awon oro wonyii

No	Oro nipa imo	Beeni	Beeko
1.	Bibalaga je amin ibere pe eniyan ti to lati maa ni ibalopo		
2.	Awon omobinrin maa n balaga saaju omokunrin		
3.	Omobinrin to tete bête sini se nkan osu tojo ori re kosi ju mewa si merinla lo ko ni lee loyun nitori okere pupo lati se n kan osu		
4.	Ti omode ba ti balaga awon ibadore a maa waye laarin okunrin si obinrin tabi obinrin si okunrin		
5.	O seese ki odomokunrin fun odomobinrin loyun		
6.	Nini ajosepo je ere igbadun lasan		
7.	Odomode ti ko ba lajo sepo lee kookan ko ni ilera to peye nipa ibalopo ni		
8.	Aikii ni ibalopo rara tabi leekookan lee fa aisan fun omokunrin		
9.	Ai kii ni ibalopo rara tabi leekoo kan lee fa aisan fun omo binrin		

23. Awon obi kan bi yin maa n feran lati so awon oro wonyii nipa eto ilera ibalopo ati ibimo awon odo fun okookan, so boya o gba, o ko gba, tabi oo mo nipa awon oro wonyii pelu re:

No	Oro	Mo gba	Nko gba	N ko mo
1.	O ye ki omobinrin ni ibalopo ko to se igbeyawo			
2.	O ye ki omokunrin ni ibalopo ki o to se igbeyawo			
3.	O ye ki awon odo ti won ko tii se igbeyawo sugbon ti won ti n ni ibalopo maa lo nkan lati fi dena oyun nini			
4.	Ti awon odomode ba nimo nipa ohun ti won fin dena oyun nini o maa n je ki won maa ni ibalopo pelu orisirisi eniyan			
5.	Biba awon odomode jiroro nipa eto ilera ibalopo ati ibimo maa n je ki won maa ni ibalopo			
6.	O ye ki awon obi maa baa awon omo won jiroro nipa awon eto ti o ro mo ibalopo ati ibimo			
7.	Ko ye ki a je ki awon odomode mo nipa eto ilera ibalopo ati ibimo			
8.	O ye ki awon obi maa gboya lati baa won odomode won jiroro nipa eto ilera ibalopo ati ibimo			

APA KETA: Ona ti awon obi ati odo langba maa n gba lati soro

24a. Nje e ti ba awon odomode yin jiroro nipa eto ilera ibalopo ati ibimo awon odo ri? 1. Beeni [ ] 2. Beeko [ ] **(To ba je beeko, lo si ibeere 44)**

24b. Nje ijiroro yi waye laarin osu mefa seyin 1. Beeni [ ] 2. Beeko [ ]

25. To ba je beeni, igbawo ni e ba awon omo yin jiroro nipa eto ilera ibalopo ati ibimo gbeyin? 1. Ana [ ] 2.Oni [ ] 3. Ose to koja [ ] 4.Ose meji seyin [ ] 5. Osu to koja [ ] 6.N ko ranti [ ] 7. So igba miran ti a ko tii daruko _____

25b. Bi igba melo ni e ma n ba odo langba yin jiroro nipa eto ilera Ibalopo and ibimo awon odo 1. E kan lose [ ] 2. Emeji lose [ ] 3. Ekan losu [ ] 4. Emeji losu [ ] 5. E kan larin osu meta [ ] 6. So omiran _____

26. Kilo sele ti efi n baa won omo yin jiroro nipa awon oro to je mo ilera to je mo ibimo nigba ti e ba won soro gbeyin?_____ _____

27. Kini e baa won omo yin so nigba ti e ba won soro gbeyin?_____

_____

28. Talo koko bere sini soro nipa eto ilera ibalopo ati ibimo? 1. Emi [ ] 2. Awon omo mi [ ] 3. Oko/iyawo mi [ ] 4. Alabagbepo mi [ ] 5. Ti eyi ti a ko daruko ba wa eso

_____

29a. Omo okunrin odo langba gbodo je omo odun melo ki a to bere si ni ba won soro nipa ibalopo ati ibimo? _____

29b. So idi ti e fi so so iye ojo ori fun okunrin_____

30a. Omo okunrin odo langba gbodo je omo odun melo ki a to bere si ni ba won soro nipa ilera ibalopo ati ibimo? _____

30b. So idi ti e fi so so iye ojo ori fun obinrin_____

31. Nje eti so fun enikan pe ki o ba awon omo yin soro nipa ilera ibalopo ati ibimo ri? 1. Beeni [ ] 2. Beeko [ ] **(Ti o ba je beeko, lo si ibeere 34)**

32. Ti o ba je beeni, se e lee so eni ti o ba won soro? (bawo lo se je siyin?) _____

33. Ti ibeere kokanlelogbon ba je beeni, kilo de ti e fi so pe ki elomiran baa won omo yin soro ilera ibalopo ati ibimo?_____

34. Asiko igbawo ni e maa n ba awon omo yin soro nipa ilera ibalopo ati ibimo? (**O lee fala si eyi ti o ba fe)** 1. Leyin ti won ba ti ile iwe de tabi ibi ise [ ] 2. Ni opin ose [ ] 3.Nigba ti won ba wa pelu ore [ ] 4. Nigba ti awon omo ba beere ibeere [ ] 5. Nigbati awon omo ba si iwa wu [ ]

6. Nigba ti won ba soro nipa re lori ero igbohun safefe bii telifisan [ ] 7. Ti eyi ti ako daruko ba wa eso_____

35. N je o rorun fun yin lati baa won omo yin soro nipa ilera ibalopo ati ibimo nigba ti e ba won so gbeyin? 1. Beeni [ ] 2. Beeko [ ] **(To ba je beeko, lo si ibeere 37)**

36. To ba je beeni fun ibeere karundinlogoji, e se alaye_____

37. To ba je beeko fun ibeere karundinlogoji e se alaye_____

38. Se elero pe awon omo yin ni imo to peye nipa ilera ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ]

(To ba je beeni, lo si ibeere 40)

39. To ba je beeko, awon ona wo le ro pe awon omo yi fi nilo imo si? _____

40. Se awon omo yin maa n soro tabi beere ibeere ti e ba n ba won jiroro nipa ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ] **(To ba je beeko, lo si ibeere 42)**

41. To baje beeni, ki ni awon ibeere naa?_____

42. Bawo ni awon omo yin se maa n dahun si awon oro to je mo ilera ibalopo ati ibimo?

1. Won maa n fe gboo [ ] 2. Won maa n fe gbo lee koo kan [ ] 3. Won kii fe gbo [ ] 4. Ko si idahun [ ]

43a. Nje e maa feran lati maa ba awon omo yin jiroro nipa ilera ibalopo ati ibimo ni ojo iwaju 1. Beeni [ ] 2. Beeko [ ]

43b. Yato si oro ilera ibalopo ati ibimo, kinni awon nkan miran ti e ma n baa won odo langba jiroro?

APA KERIN

44. Daruko awon ona ti awon odomode ti le gbo oro nipa ilera ibalopo ati ibimo ni agbegbe yii? (**Fa amin ✓ si eleyi ti won ba daruko)**

No	Awon ona	Awon ti won daruko	Awon ti won ko daruko
1.	Mama		
2.	Baba		
3.	Ore		
4.	Redio		
5.	Telefisan		
6.	Iwe iroyin		
7.	Iwe ilewo		
8.	Oluko/Oga		
9.	Osise eto ilera		
10.	Pasito/lemomu		
11.	Obi tobi obi eni		
12.	Daruko awon miran		

45. Ewo ninu awon eniyan/ona wonyii ni awon odomode feran ju lati maa ba won soro nipa eto ilera ibalopo ati ibimo, e si so idi fun awon idahun yin.

No	Awon ona	Ona ti won fe	Ona ti won fe ju lo	Idi ti won fi fee
1.	Mama			
2.	Baba			
3.	Ore			
4.	Redio			
5.	Telifisan			

6.	Iwe iroyin			
7.	Iwe ile wo			
8.	Oluko/Oga			
9.	Osise eto ilera			
10	Pasito			
11.	Obi to bi obi eni			
12.	Awon miran ti a ko daruko			

46. Se e lero pe e je ona ti awon odo ti lee gbo oro nipa eto ilera ibalopo ati ibimo bii (kokoro to je mo ibalopo eedi, oyun, didena oyun sise) 1. Beeni [ ] 2. Beeko [ ]
47. To ba je beeko, kinni idi?_____

APA KARUN: Awon nkan ti o lee mu Ibara eni soro gun rege laarin obi si omo tabi to le Se ifa seyin.

48. Nje e gbo nipa eto ti o da lori ibara eni soro laarin obi ati omo 1. Beeni [ ] 2. Beeko [ ]
49. Nje e pelu awon obi ti won se idani leko na fun? 1. Beeni [ ] 2. Beeko [ ] ***(ti o ba je beeko, lo si ibere 51)***
50. Ti o ba je beeni, bawo ni e se ri eto na si? 1. Ose Pataki gan [ ] 2. Ko se Pataki [ ]
51. **Ti o ba je beeko si ibeere 49,** Nje ese tan lati gba idani leko ti aye re bay o ni ojo iwaju? 1. Beeni [ ] 2. Beeko [ ]
52. Nje eto yi seyin ni anfani kan? 1. Beeni [ ] 2. Beeko [ ]
53. Ti o ba je beeni, awon anfani wo ni e ri ninu eto na? _____
_____
54. Bawo ni idani leko na se je iwulo fun yin? _____
_____
55. Ki ni awon nkan ti e nife si ninu idani leko na? _____
_____
56. Kini awon nkan ti e ko nife si ninu idani leko na? _____
_____
57. Awon oro wo ni e baa won odo langba yin so ju ni osu mefa seyin? ***(O lee fa ila si eyi to ba too)***

1. Didena aarun ibalopo 2. Didena kokoro eedi/ aisan kogbogun 3. Didena Oyun
4. Oro nipa eko/ise 5. Didena oyun sise

58. Leyin idani leko yi, nje e ni isoro lati baa won odo langba yin soro nipa ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ]

59. Ti o ba je beeni, kini awon isoro ti e ni nigba na? _____

_____

60. Nje e le gba ni amoran lati gbe eto yi losi agbegbe miran ni ijoba ibile yi? 1. Beeni [ ] 2. Beeko [ ]

61. Ti o ba je beeni, ki ni idi? _____

_____

62. Ti o ba je beeko, ki ni idi? _____

_____

Mo dupe lowo yin fun asiko ti e lo pelu mi

Appendix IIId

IBEERE FUN AWON ODO

AKORI : Ipati idani leko lee ko lori ibara eni soro nipa imo eto ati ilera to je mo ibimo laarin obi ati odo langba won ni agbegbe meji ni Ipinle Oyo

Ikini: oruko mi ni……., mo je omo ile eko giga ti Ile eko giga ti Ibadan.Mo n se iwadi lati mo ipa ti idanileko lori ibara eni soro nipa imo ati eto ilera ibalopo ati ibimo laarin obi ati awon odo won ni agbegbe yii. Odo langba e ni ti o je omo odun mewa si ookandinlogun. Mo wa lati wa mo kun imo ni, inu mi a si dun ti e ba le yonda asiko die fun mi. E jowo anfaani wa fun yin lati salaye nnkan ti e gbagbo pelu mi. Gbogbo oro ti e baso ni a maa lo lati fi se idanileko, ko si si eni ti a o ba so nkankan ninu awon oro wonyii. Mo si fe fi dayin loju pe n ko ni lo oruko yin ninu iwadi yii. E se fun ifowosowopo yin.

Oruko Ijoba Ibile yi_____

No_____

APA KINNI:

Akiyesi: E jowo e dahun awon ibeere wonyii nipa ara yin nigba ti e ba fa ami yi (✓) fun idahun ti e ro pe o ye fun awon ibeere naa ni ero okan yin

1. O to omo odun melo…….(**E so odun ti a bi yin**)
2. O je omo …….. 1. Okunrin[ ] 2. Obirin[ ]
3. N je o nlo si ile eko? 1. Beeni [ ] 2. Beeko [ ]
4. Kilaasi wo lo wa? (**fun awon ti o nlo si ile eko nikan**)
   1. Alako beere kefa [ ] 2. Girama 1 [ ] 3. Girama 2 [ ] 4. Girama 3 [ ] 5. Girama 4 [ ] 6. Girama 5 [ ] 7. Girama 6 [ ] 8. Ti eyi ti ako daruko ba wa eso_____
5. Ibo lo kawe de? (**fun awon ti ko lo si ile eko mo nikan**): 1. Mi o lo si ile-iwe rara [ ] 2. Ile kewu [ ] 3. Ile-iwe alakobere [ ] 4. Mo ka die ninu ile-iwe eko- girama [ ] 5. Mo pari ile-iwe eko girama
6. Eya wo ni e? 1. Yoruba [ ] 2. Hausa [ ] 3.Igbo [ ] 4. So Omiran _____
7. Esin 1. Igbagbo [ ] 2. Musulumi [ ] 3. Esin abalaye [ ] 4. So Omiran _____
8. Ipo wo lo wa larin omo iya re? _____
9. Iwe melo ni baba re ka? 1. Won o lo si ile-iwe rara [ ] 2. Eko agba [ ] 3. Ile kewu [ ] 4. Won ko pari ile-iwe alakobere [ ] 5. Won pari ile-iwe eko alakobere [ ] 6. Won ka die ninu ile-iwe eko- girama [ ] 7. Won pari ile-iwe eko girama [ ] 8. Won ka die

ninu ile-iwe giga [ ] 9. Won pari ile-iwe giga [ ] 10. Won ko ise owo [ ] 11. Eko eyikeyi ti a ko daruko _____

10. Ise wo ni baba re yan laayo? 1. Ise ijoba[ ] 2. Kata kara [ ] 3. Onise owo [ ] 4. Agbe [ ] 5. Eko eyikeyi ti a ko tii daruko _____
11. Iwe melo ni mama re ka? 1. Won o lo si ile-iwe rara [ ] 2. Eko agba [ ] 3. Ile kewu [ ] 4. Won ko pari ile-iwe alakobere [ ] 5. Won pari ile-iwe eko alakobere [ ] 6. Won ka die ninu ile-iwe eko- girama [ ] 7. Won pari ile-iwe eko girama [ ] 8. Won ka die ninu ile-iwe giga [ ] 9. Won pari ile-iwe giga [ ] 10. Won ko ise owo [ ] 11. Eko eyikeyi ti a ko daruko _____
12. Ise wo ni mama re yan laayo? 1. Ise ijoba [ ] 2. Kata kara [ ] 3. Onise owo [ ] 4. Agbe [ ] 5. Iyawo ile [ ] 6. Eko eyikeyi ti a ko tii daruko _____
13. Iyawo melo ni baba re fe? 1. Mama mi nikan [ ] 2. _____ yato si mama mi
13a. Omo melo lo wa ninu idile yin? _____ (**E ko iye nomba ti won je sii**)
13b. Okunrin melo:_____ Obinrin melo_____ (**Fi iye nomba ti won je sii**)
14. Odo tani o ngbe bayi? 1. Pelu awon obi mi mejeji [ ] 2. Mama mi nikan [ ] 3. Baba mi nikan [ ] 4. Mo n dagbe [ ] 5. Odo awon ebi mi [ ] 6. Alagbato [ ] 7. Awon to bi obi mi [ ] 8. Orekunrin/binrin [ ]

APA KEJI: Imo nipa Ibalopo ati Ibimo laarin Odo langba

15. Ewo ninu awon ona wonyii ni awon odomode lee lo lati dena oyun nini? (**Fala (✓) si gbogbo awon ti e lero pe o je idahun si awon ibeere yii**)

No	**Ona ti a lee gba lati dena oyun nini**	**Beeni**	**Beeko**
1.	Yiyera fun ibalopo		
2.	Lilo oruka ibile		
3.	Yiyera fun ibalopo alatagba		
4.	Lilo roba idaabobo ni gbogbo igba ti a ba fe lajosepo		
5.	Nini ibalopo ni asiko ti a mo pe oyun ko lee waye		
6.	Lilo awon eto ti a fin dena oyun nini ti igbalode		

16. Se o ni orekunrin/orebinrin? 1. Beeni [ ] 2. Beeko [ ]
17. O to omo odun melo ki o to bere sii ni ibalopo? Odun _____ Rara [ ]
18a. Se o ni ibalopo ni osu mefa seyin? 1. Beeni [ ] 2. Beeko [ ]
18b. Se o lo roba idaabobo nigba ti o ni ibalopo gbeyin? 1. Beeni [ ] 2. Beeko [ ]

19a. Alabalopo melo lo ti ni? _____

19b. Alabalopo melo lo ni bayi? _____

20. N je eti gbo nipa kokoro tabi arun eedi? 1. Beeni [ ] 2. Beeko [ ] **(To ba je beeko, lo si ibeere 23)**

21. Se e lero pe o see se ki odomode ni kokoro tabi arun eedi? 1. Beeni [ ] 2. Beeko [ ]

21a. To ba je beeni, jowo se alaye_____

_____

21b. To ba je beeko, jowo se alaye_____

_____

22. N je ohun ti a le se wa lati dena kiko kokoro/arun eedi? 1. Beeni [ ] 2. Beeko [ ]

23. E wo ninu awon wonyii lo je ooto tabi iro nipa ona ti a lee gba lati yera fun kokoro to je mo ibalopo?

No	Oro	Ooto ni	Iro ni
1.	Yiyago patapata fun ibalopo		
2.	Jije olododo si ololufe eni		
3.	Yiyera fun ibalopo alatagba		
4.	Lilo roba idabobo ni gbogbo igba ti a ba fe lajosepo		
5.	Yiyera fun awon olowo nabi		
6.	Ti a ko ba ba enikeni lo abe, iyarun tabi abo/sibi ijeun papo		
7.	Ti a ko ba ba enikeni lo ile igbonse papo		

24. Daruko Ona meta ti kokoro eedi lee gba tan ka(**E ma ka awon ti a ko si sale yii, fala si eyi ti won baso**) 1. Ibalopo pelu eni to ti ni kokoro yii [ ] 2. Lati ara mama si omo [ ] 3.Nipase gbigba eje eni ti o ti ni kokoro yii [ ] 4. Yiya ohun elo bi abe tabi bileedi lo [ ] 5. Omiran_____

25. Daruko meta ninu ewu tabi isoro ti o ro mo ki omode tete loyun (**ma ka awon ti a ko si sale yii, fala si eleyi ti won daruko**) 1. Nini aisan bii eedi ati awon ti o lee jeyo nipase ibalopo [ ] 2. Ijapo ile ito ati ile ibimo [ ] 3. Iku iya nipase omo bibi [ ] 4. Airomo bi [ ] 5. Arun jejere oju ara [ ] 6. Omiran_____

26. E so boya ooto ni tabi iro ni awon oro wonyi

No	Oro nipa imo	Beeni	Beeko
1.	Bibalaga je amin ibere pe eniyan ti to maa ni ibalopo		
2.	Awon omobinrin maa n balaga saaju omokunrin		
3.	Omobinrin to tete bête sini se nkan osu tojo ori re kosi ju mewa si merinla lo ko ni lee loyun nitori okere pupo lati se n kan osu		
4.	Ti omode ba ti balaga awon ibadore a maa waye laarin okunrin si obinrin tabi obinrin si okunrin		
5.	O seese ki odomokunrin fun odomobinrin loyun		
6.	Nini ajosepo je ere igbadun lasan		
7.	Odomode ti ko ba lajo sepo lee kookan ko ni ilera to peye nipa ibalopo ni		
8.	Aikii ni ibalopo rara tabi leekookan lee fa aisan fun omokunrin		
9.	Ai kii ni ibalopo rara tabi leekoo kan lee fa aisan fun omo binrin		

27. Awon odomode kan maa n feran lati so awon oro wonyii nipa eto ilera ibalopo ati ibimo awon odo fun okookan, so boya o gba, o ko gba, tabi oo mo nipa awon oro wonyii pelu re:

No	Oro	Mo gba	Nko gba	N ko mo
1.	O ye ki omobinrin ni ibalopo ko to se igbeyawo			
2.	O ye ki omokunrin ni ibalopo ki o to se igbeyawo			
3.	O ye ki awon odo ti won ko tii se igbeyawo sugbon ti won ti n ni ibalopo maa lo nkan lati fi dena oyun nini			
4.	Ti awon odomode ba nimo nipa ohun ti won fin dena oyun nini o maa n je ki won maa ni ibalopo pelu orisirisi eniyan			
5.	Biba awon odomode jiroro nipa eto ilera ibalopo ati ibimo maa n je ki won maa ni ibalopo			
6.	O ye ki awon obi maa baa awon omo won jiroro nipa awon eto ti o ro mo ibalopo ati ibimo			

7.	Ko ye ki a je ki awon odomode mo nipa eto ilera ibalopo ati ibimo			
8.	O ye ki awon obi maa gboya lati baa won odomode won jiroro nipa eto ilera ibalopo ati ibimo			

APA KETA: Ona ti awon obi ati odo langba maa n gba lati soro

28. Nje o ti ba awon obi re jiroro nipa eto ilera ibalopo ati ibimo awon odo ri? 1. Beeni [ ] 2. Beeko [ ]

(To ba je beeko, lo si ibeere 63)

29a. To ba je beeni, igbawo ni o ba awon obi re jiroro nipa eto ilera ibalopo ati ibimo gbeyin? 1. Ana [ ] 2. Oni [ ] 3. Ose to koja [ ] 4.Ose meji seyin [ ] 5. Osu to koja [ ] 6.N ko ranti [ ] 7. So igba miran ti a ko tii daruko _____

29b. Bi igbamelo ni o maa n ba awon obi re soro nipa eto ilera ibalopo ati ibimo? 1. Eekan lose [ ] 2. Eemeji lose [ ] 3. Eekan losu [ ] 4. Eemeji losu [ ] 5. Eekan losu meta [ ] 6. Ti eyi ti a ko daruko ba wa so _____

30. Kilo sele ti o fi ba awon obi re jiroro nipa awon oro to je mo eto ilera ibalopo ati ibimo nigba ti o ba won soro gbeyin?_____

31. Kini o ba awon obi re so nigba ti o ba won soro gbeyin?_____
_____

32. Talo koko bere sini soro nipa eto ilera ibalopo ati ibimo? 1. Emi [ ] 2. Awon obi mi [ ] 3. Alabagbepo mi [ ] 4. Ti eyi ti a ko daruko ba wa so _____

33. N je awon oro ti won ba e so te e lorun bi? 1. Beeni [ ] 2. Beeko [ ]

34. To ba je beeni, se alaye _____

35. To ba je beeko, se alaye _____

36. N je asiko ti won lo latifi ba e soro te e lorun?

37. To ba je beeni, se alaye _____

38. To ba je beeko, se alaye _____

Odiwon Ijiroro (Quality of Communication)

39. So boya beeni tabi beeko si awon ibeere wonyi nipa odiwon ijiroro laarin iwo ati awon obi re nigba ti won ba e soro nipa eto ilera ibalopo ati ibimo gbeyin.

A	**Bi oro se ye wa si**	**Beeni**	**Beeko**
1.	Se oro ti awon obi re ba e so ye e bi?		

2.	Se oni imo to peye lori koko oro to won ba e so?		
3.	Se awon obi re se alaye lekun rere lori awon oro ti ko ye e		
4.	Se o lero wipe awon oro ti o ba awon obi re so ye won?		
5.	Se ohun ti awon obi re so tete ye e?		
B	**Bi won se fesi**		
1.	Awon obi mi fesi si awon ibeere ati ebe mi kia kia nigba ti a n jiroro		
2.	Ijiroro naa lo geere laisi figba kankan wani idake je		
3.	Awon obi mi fe gbo ero okan mi?		
4.	Nigba ti mo ba bere nipa ohun to rumiloju awon obi mi maa n dahun lesekese		
5.	Okan ninu wa maa n dake lati igba de igba nigbati aba n jiroro		
C	**Ifokanbale**		
1.	Se o maa n beru lati ba awon obi re soro?		
2.	Se o lero pe awon obi re gba eri re je?		
3.	Se o lero pe awon obi re je eni ti o se fokan tan?		
4.	N je o rorun fun e lati maa ba awon obi re jiroro?		
5.	O ro awon obi mi lorun lati bami jiroro		

40. Bi omo odun melo lobere si ni ba awon obi re soro nipa ibalopo ati ibimo?_____
41. Nje o pe elomiran wa sibi ti o tin ba awon obi re jiroro nipa ilera ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ] **(Ti o ba je beeko, lo si ibeere 48)**
42. Ti o ba je beeni, se o le so eni naa? (bere awon to wa nibe) _____
43. Kilo de ti o fi so pe ki elomiran wa ni ibi ijiroro naa? _____
44a. Nje o lero pe o se pataki lati maa jiroro nipa ilera ibalopo ati ibimo pelu awon obi re?
44b. Se alaye _____
45. Nje o gba pe awon odo nilo lati maa ba awon obi won soro nipa ilera ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ]
46. To ba je beeni, kini idi ti o fi gba bee _____
47. To ba je beeko, kini idi ti o o fi gba bee _____
48. Asiko igbawo ni o maa n ba awon obi re soro nipa ilera ibalopo ati ibimo? (**O lee fala si eyi ti o ba fe)** 1. leyin ti won ba de tabi ibi ise [ ] 2. Ni ipari ose [ ] 3.Nigba ti won ba wa pelu ore [ ] 4.Nigba ti won ba beere ibeere [ ] 5. Nigbati awon odo to wa layika wa ba si iwa wu [ ] 6. Nigba ti won ba soro nipa re lori ero igbohun safefe [ ] 7. Ti eyi ti ako daruko ba wa eso_____

49. N je o rorun fun e lati maa ba baba re soro nipa ilera ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ]

50. Se alaye _____

51. N je o rorun fun e lati maa ba mama re soro nipa ilera ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ]

52. Se alaye _____

53. N je o rorun fun e lati maa ba baba ati mama re soro nipa ilera ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ]

54. Se alaye _____

55. Se o lero pe mama re ni imo to peye nipa ilera ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ]

56. Se o lero pe baba re ni imo to peye nipa ilera ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ]

57. Se awon obi re maa n soro tabi beere ibeere ti o ba n ba won jiroro nipa ibalopo ati ibimo? 1. Beeni [ ] 2. Beeko [ ] **(To ba je beeko, lo si ibeere 59)**

58. To ba je beeni, ni ona wo? _____

59. Nje o lero pe awon obi re feran tabi gba lati maa jiroro nipa eto ilera ibalopo ati ibimo pelu re? 1. Beeni [ ] 2. Beeko [ ]

60. Se alaye _____

61. Bawo ni awon obi re se maa n dahun si awon oro to je mo ilera ibalopo ati ibimo?
1. Won maa n fe gboo [ ] 2. Won maa n fe gbo lee koo kan [ ] 3. Won kii fe gbo [ ]
4. Ko si idahun [ ]

62a. Nje o maa feran lati maa ba awon obi re jiroro nipa ilera ibalopo ati ibimo ni ojo iwaju?
1. Beeni [ ] 2. Beeko [ ]

62b. Yato si eto nipa ilera ibalopo ati ibimo, awon oro miran won ni o tun maa n ba awon obi re so? _____

APA KERIN: AWON ONA TI A TI LEE GBO ETO NIPA ILERA IBALOPO ATI IBIMO

63. Daruko awon ona ti awon odomode ti lee gbo eto nipa ilera ibalopo ati ibimo ni agbegbe yii? (**Fa amin ✓ si eleyi ti won ba daruko)**

No	Awon ona	**Awon ti won daruko**	**Awon ti won ko daruko**
1.	Mama		
2.	Baba		

3.	Ore		
4.	Redio		
5.	Telifisan		
6.	Iwe iroyin		
7.	Iwe ile wo		
8.	Oluko/Oga		
9.	Osise eto ilera		
10	Pasito		
11.	Obi to bi obi eni		
12.	Awon miran ti a ko daruko		

64. Se o lero pe awon obi re je ona ti o ti lee gbo oro nipa eto ilera ibalopo ati ibimo bii (kokoro to je mo ibalopo eedi, oyun, didena oyun sise) 1. Beeni [ ] 2. Beeko [ ]

65. To ba je beeko, kinni idi? _____

66. Ewo ninu awon eniyan/ona wonyii ni o feran ju lati maa ba e soro nipa eto ilera ibalopo ati ibimo, si so idi fun awon idahun re.

No	**Awon ona**	**Ona ti mo fe**	**Ona ti mo fe ju lo**	**Idi ti mo fi fee**
1.	Mama			
2.	Baba			
3.	Ore			
4.	Redio			
5.	Telifisan			
6.	Iwe iroyin			
7.	Iwe ile wo			
8.	Oluko/Oga			
9.	Osise eto ilera			
10	Pasito			
11.	Obi to bi obi eni			
12.	Awon miran ti a ko daruko			

APA KARUN: Awon nkan ti o lee mu Ibara eni soro gun rege laarin obi si omo tabi to le Se ifa seyin.

67. Nje baba tabi iya re ba e jiroro lori eto ilera nipa ibalopo ati ibimo ni aarin osu mefa seyin? 1. Beeni [ ] 2. Beeko [ ]

68. Awon oro wo ni baba/iya re ba e jiroro lori ni osu mefa seyin?

1. Didena aarun ibalopo [ ] 2. Didena kokoro eedi/ aisan kogbogun [ ] 3. Didena Oyun [ ] 4. Oro nipa eko/ise [ ] 5. Didena oyun sise [ ] 6. Ko oun miran ti a ko daruko ____

69. Tani o da oro na sile / Tani o koko bere oro na? 1. Emi [ ] 2. Iya mi [ ] 3. Baba mi [ ] 4. Alabagbe mi [ ] 5. Ore mi [ ] 6. Ko oun miran ti a ko daruko _____
70. Nje iyato ti wa ninu iwuwa si re nipase ijiroro na? 1. Beeni [ ] 2. Beeko [ ]
71. Daruko iyato na ni pato _____
72. Nje o le so wipe iyato yi wa nipase ijiroro ti o baa won obi re se? 1. Beeni [ ] 2. Beeko [ ]
73. Nje o se akiyesi iyato ninu bi obi re se ba o soro nipa ilera ibalopo ati ibimo teletele ati laarin osu mefa seyin? 1. Beeni [ ] 2. Beeko [ ]
74. Iyato wo pato ni o se akiyesi re? _____
75. Nje o le ba baba/iya re soro nipa ilera ibalopo ati ibimo lai lora? 1. Beeni [ ] 2. Beeko [ ]

Mo dupe lowo re fun asiko ti o lo pelu mi

Appendix IV

The Training Curriculum for the Parents at Egbeda Community

S/N	Objectives	Content elements	Methods	Materials	Mode of Assessment
1.	At the end of the training programme, Parents should be able explain the main goal and the specific objectives of the training workshop	Main Goal of the training workshop Specific Objectives of the training workshop	Lecture, questions and answers	Lecture notes, slides, writing materials	Pre/Post test
2.	At the end of the training programme, parents should be able explain HIV and AIDS, difference between HIV and AIDS, Modes of transmission of HIV, Signs and symptoms of HIV and AIDS and Prevention of HIV and AIDS.	Definition of HIV and AIDS Difference between HIV and AIDS, Modes of transmission of HIV, Signs and symptoms of HIV and AIDS Prevention of HIV and AIDS	Lectures, group discussion, questions and answers	Lecture notes, pamphlets, slides, pictures, writing materials	Pre/Post test
3.	At the end of the training programme, parents should be able to discuss Sexually Transmitted Infections (STIs), enumerate at least 3 STIs, discuss common signs and symptoms of STIs, explain the relationship between STIs and HIV	Definition of STIs, Types of common STIs, Signs and symptoms of common STIs, Modes of contacting STIs Relationship between other STIs and HIV	Lectures, group discussion, questions and answers	Lecture notes, pamphlets, slides, pictures, writing materials	Pre/Post test
4.	At the end of the training programme parents should be able to mention at least five positive and five negative ways to communicate with children.	Definition of communication; importance of communication, barriers to communication; factors promoting communication	Lectures, group discussion, questions and answers	Lecture notes, pamphlets, slides, pictures, writing materials	Pre/Post test
5.	At the end of the training programme, parents should be able to explain effective communication and identify skills required for effective	Types of communication - verbal and non-verbal Communication, skills required for effective communication-	Lectures, group discussion, questions and answers	Lecture notes, pamphlets, slides, pictures, writing materials	Pre/Post test

	communication with their adolescent	Listening Skills Writing Skills Questioning Skills Confidentiality Interpersonal Communication. Quality of communication			
6.	At the end of the training programme, parents should be able to explain their roles as change agents	Parents: roles of parents in the community	Lectures, group discussion, questions and answers	Lecture notes, pamphlets, slides, pictures, writing materials	Pre/Post test
7.	At the end of the training programme parents should be able to help their children avoid sexual risks.	Ways of help adolescent to avoid sexual risks	Lectures, group discussion, questions and answers	Lecture notes, pamphlets, slides, pictures, writing materials	Pre/Post test
8.	At the end of the training programme, parents should be able to role play a good communication session	Explanation of Role Play	Group discussion, questions and answers	Description of role play	Role Play
9.	At the end of the training programme, parents should be able enumerate the activities expected of them during the follow up period.	Ways to Initiate and increase frequency of ARH discussion with their wards. Importance of ARH discussion from parents, how and when to do it.	Group discussion, questions and answers	Lecture notes, pamphlets, slides, pictures, writing materials	Pre/Post test, Role Play

Appendix V

DEPARTMENT OF HEALTH PROMOTION AND EDUCATION
FACULTY OF PUBLIC HEALTH
COLLEGE OF MEDICINE
UNIVERSITY OF IBADAN

Certificate of Participation

This is to certify that

_____

Participated in the

PARENT-ADOLESCENT REPRODUCTIVE HEALTH COMMUNICATION TRAINING HELD IN EGBEDA IN SEPTEMBER, 2013

Mr. Titiloye Musibau A
Student Researcher

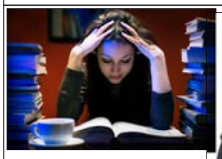
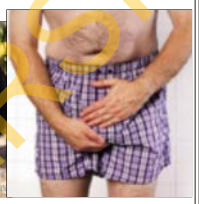
Prof. Ademola J. Ajuwon
Supervisor

Appendix VI

MIS FORM FOR PARENT-CHILD COMMUNICATION

Category of Respondent: ..... Sex: ..... ID No: .....

Sex of Index Child: ..... Month..... Week ..... S/N.....

  Use of Contraceptive Pregnancy/Abortion Prevention	
  Face Study	
 Face Work	
 HIV/AIDS Prevention	
  STI Prevention	
Others (Please Specify) _____	

Appendix VII

Training Workshop for Parents on Parents Child Communication Pre test

Identifier _____ Sex:_____ Date:_____

1. List at least 3 examples of STI?

   i_____;

   ii_____

   iii_____

2. What are the various ways of contacting STI?

   i_____;

   ii_____

   iii_____

3. What are the symptoms that would show someone has an STI?

   i_____;

   ii_____

   iii_____

4. What are various ways of preventing STI among adolescents?

   i_____;

   ii_____

   iii_____

5. Only adult can have STI 1. Yes 2. No
6. Children aged 10-19 years cannot have STI 1. Yes 2. No
7. Since parents doesn't have STI, their adolescent children cannot have it 1. Yes 2. No
8. Mention roles that parents can play in preventing STI among their adolescent children

   i_____

   ii_____

   iii_____

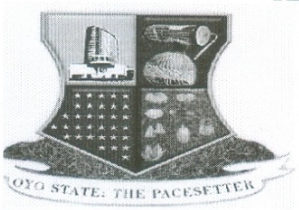
9. Mention four sources of Information on Adolescent Reproductive Health available to the adolescent? i_____ ii_____ iii_____ iv_____
10. We communicate only by word of mouth. 1. Yes 2. No
11. A sender can be a barrier to communication. 1. Yes 2. No
12. During communication, a child should always listen and not talk. 1. Yes 2. No
13. Poor communication can cause separation of parents. 1. Yes 2. No

14. Poor communication sometimes leads children to rebel 1. Yes 2. No
15. Talking to a youth about sex and sexuality is wrong. 1. Yes 2. No
16. It is good to stop a child who is talking and correct him or her while she is still talking. 1. Yes 2. No
17. In communication, a young person who is talking should not look at the parents face to face. 1. Yes 2. No
18. Parent-child communication is transferring messages/information from parents to children. 1. Yes 2. No
19. If my child is tired, that should not stop me from talking to him/her. 1. Yes 2. No
20. Is the responsibility of only mothers to be communicating with their adolescents

1. Yes 2. No

Appendix VIII

TELEGRAMS..... TELEPHONE.....



MINISTRY OF HEALTH

DEPARTMENT OF PLANNING, RESEARCH & STATISTICS DIVISION

PRIVATE MAIL BAG NO. 5027, OYO STATE OF NIGERIA

Your Ref. No. .....

All communications should be addressed to the Honorable Commissioner quoting

Our Ref. No. AD 13/ 479/____ April, 2015

The Principal Investigator,
Department of Health Promotion and Education,
Faculty of Public Health,
College of Medicine,
University of Ibadan,
Ibadan.

Attention: Titiloye Musibau

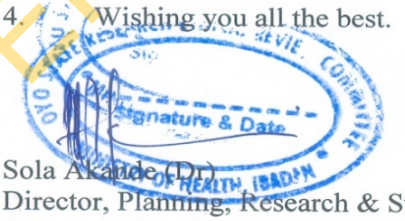
Ethical Approval for the Implementation of your Research Proposal in Oyo State

This acknowledges the receipt of the corrected version of your Research Proposal titled: "Effects of Training on Knowledge and Quality of Reproductive Health Communication Between Parents and their Adolescents in Two Communities in Ibadan, Nigeria."

2. The committee has noted your compliance with all the ethical concerns raised in the initial review of the proposal. In the light of this, I am pleased to convey to you the approval of committee for the implementation of the Research Proposal in Oyo State, Nigeria.

3. Please note that the committee will monitor closely and follow up the implementation of the research study. However, the Ministry of Health would like to have a copy of the results and conclusions of the findings as this will help in policy making in the health sector.

4. Wishing you all the best.



Sola Akande (Dr.)
Director, Planning, Research & Statistics
Secretary, Oyo State, Research Ethical Review Committee

Appendix IX

Plate 1: Training session at the experimental (Egbeda) LGA [A=Pre training meeting with potential trainer; B= Meeting with Five-Member Training Committee; C, D, E and F= Training sessions]

Plate 2: Group photograph